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| Traveler Title | VTA RF Cavity Test Plan  |
| Traveler Abstract | Test Plan / Request for testing of cavities in the Vertical Test Area (VTA) |
| Traveler ID | SRFOPS-VTA-CAV-TSTR |
| Traveler Revision  | R1 |
| Traveler Author | K. Davis |
| Traveler Date | 15-Sep-23 |
| NCR Informative Emails | STIRBET,AREILLY |
| NCR Dispositioners | JTKENT,POWEN,KDAVIS |
| D3 Emails | STIRBET,AREILLY,JTKENT,POWEN,KDAVIS |
| Approval Names | K. DAVIS | J. KENT | P. OWEN | A. REILLY |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | SME | Project Manager |

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| References | List and Hyperlink all documents related to this traveler. This includes, but is not limited to: safety (THAs, SOPs, etc), drawings, procedures, and facility related documents. |
| [VTA SOP](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-48111/A-09-001-SOP-21542%5B1%5D.pdf) NEEDS TO BE LINKED TO MOST RECENT | C75-PR-CPR-VTRF-R4-1 | C100R-PR-VTA-CAV-VTRF-R2 | L2HE-PR-VTA-CAV-VTRF-R1 | NB3SN-CP-C75-CPR-VTRF-R1 |
| Theory and practice of cavity RF test systems | CP-STP-CAV-VTRF-OST-R1 | L2HE-PR-VTA-CAV-AMMS |  |  |

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| Revision Note |  |
| R1 | Initial release of this Traveler. |

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| **VTA TEST REQUIREMENTS FOR CAVITIES**(To be completed by Principal Investigator) |
| **PROJECT SELECTION** |
| *Select the Project Abbreviation / Charge Code from list.*[[PROJSN]] <<PROJSN>>*Select Charge Code from list*.[[PROJChargeCode]] <<PROJCODESN>>*If project charge code is not found enter charge code in the text box below.*[[PROJChargeCode]] <<TEXT>>[[If a new charge code is entered then add to list]] <<NOTE>> |
| **PRINCIPAL INVESTIGATOR** |
| [[PrincipalInvestigator]] <<SRF>>[[automate name of PI to session username]] <<NOTE>>[[TestPlanDate]] <<TIMESTAMP>>[[autofill date with today date]] <<NOTE>> |
| **TEST SELECTIONS** |
| **TESTPLAN**Select the VTA Test plan from list. [[VTATestPlan]] <<TEXT>>[[Pull all testplans from the traveler SRFOPS-VTA-CAV-TSTP and put in VTATestPlan dropdown]] <<NOTE>> |
| **DATE OF REQUEST**[[RequestDate]] <<TIMESTAMP>> |
| **CAVITY TO BE TESTED** *Select the Cavity Serial Number / Cavity Name from list*[[CAVSN]] <<CAVSN>>*If Serial Number not found enter NEW Serial Number in the text box below.*[[CavName]] <<TEXT>>[[Add new CavName to CAVSN list]] <<NOTE>> |
| **DEWAR REQUEST**[[PreferredDewar]] {{3,4,5,6,7,8}} <<RADIO>>[[NumberOfCavities]]{{Single,Pair,Three}}<<Select>> |
| **RELIEF VALVE VERIFICATION**Is each vacuum space on the test stand protected by a properly sized, cryogenically rated, non-isolable relief valve?[[ReliefValve]] <<YESNO>>List location and rating for each relief valve:[[ReliefValveComment]] <<COMMENT>> |
| **TEST PARAMETERS**[[TemperatureRequirement]] <<FLOAT>> (float)[[CavityPimode(MHz)]] <<FLOAT>> (float)[[SpecialConsiderations]] <<COMMENT>> |
| **ADDITIONAL REQUIREMENTS**[[PreferedRFSystem]]{{Production,RD}}<<RADIO>>*Specify if successive RF tests will be done on the same cavity in the same Dewar*[[SuccessiveRFTests]]<<YES/NO>>[[DewarTemperatures]]{{Single,Multiple}}<<Select>>[[DewarMagnetics]]{{Choice1,Choice2,Choice3}}<<Select>>[[OSTdata]]<<YESNO>> *(Instrumentation for collecting Oscillating Superleak Transducer data)*[[HOMdata]]<<YESNO>>*If YES is selected connect/ check cables*[[AMMSneeded]]<<YESNO>> *(RF setup for Anti-Mode Mixing Control)*[[OtherRequirements]]<<COMMENT>> |
| **TEST REQUEST SUBMISSION** |
| *IF Test Request is complete, then an email of the request will be sent to the VTA Test Coordinators* [[SubmitTestRequest]] <<CHECKBOX>>[[TestRequestEmail]] {{KDAVIS,JTKENT,POWEN,TGOODMAN}} <<EMAIL>>[[TestRequestEmail]] {{VTA Test Plan Approved}} <<EMAILSUBJ>>[[Only email if the SubmitTestRequest is YES]] <<NOTE>> |

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| **VTA CAVITY TEST ACTIVATION**(To Be Completed by CRYO Operator) |
| [[VTATPActive]] <<YESNO>>[[VTATPActiveCoord]] {{KDAVIS,JTKENT,POWEN,TGOODMAN}} <<SELECT>>[[VTATPActiveDate]] <<TIMESTAMP>> |
| **EMAIL**: The VTA Facility Manager[[VTATPActiveEmail]] {{KDAVIS,JTKENT,POWEN,TGOODMAN}} <<EMAIL>>[[VTATPActiveEmail]] {{VTA Test Plan is Active}} <<EMAILSUBJ>> |
| **DEWAR** [[Dewar]] {{3,4,5,6,7,8}} <<RADIO>>[[SpecifyCavityNO]]{{Single,Pair,Three}}<<Select>>*Select cavity serial number CAVSN1 for single cavity, CAVSN1 and CAVSN2 for pair, CAVSN1 to 3 for three cavities.*[[CAVSN1]] <<CAVSN>>[[CAVSN2]] <<CAVSN>>[[CAVSN3]] <<CAVSN>> |
| **Test stand loaded in DEWAR**[[TestStandLoaded]] <<TIMESTAMP>>[[TestStandLoadedOK]] <<YESNO>>[[CraneOperator]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>> |
| **RELIEF VALVE VERIFICATION**[[ReliefValveOK]] <<YESNO>>[[CryoOperator]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>> |
| **ADDITIONAL REQUIREMENTS**[[DewarMagneticOK]] <<YESNO>>[[OSTcablesInstrOK]]<<YESNO>>[[OtherRequirementsFullfiled]]<<COMMENT>>[[Technician]] <<SRFCVP>> |
| [[VTATestCoord]] {{JKENT}} <<HOLDPOINT>> |

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| **VTA CAVITY TEST FINALIZED**(To Be Completed by VTA Operator)Format option 1 |
| [[VTAOperator]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>> |
| [[VTATestDdate]] <<TIMESTAMP>> |
| [[TestDewar]] {{3,4,5,6,7,8}} <<SELECT>> |
| **SINGLE CAVITY TEST** |
| **Select Single Cavity**[[CAVSNSingle]] <<CAVSN>>*Provide Traveler AND Sequence Number for the CAVSN tested.*[[SingleCavProjectTraveler]] <<TEXT>>[[SingleCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for SingleCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for SingleCavProjectSeqNum]] <<NOTE>> |
| **PAIR CAVITY TEST** |
| **Select Bottom Cavity**: [[CAVSNBottom]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[BottomCavProjectTraveler]] <<TEXT>>[[BottomCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for BottomCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for BottomCavProjectSeqNum]] <<NOTE>> |
| **Select TOP Cavity:** [[CAVSNTop]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[TopCavTraveler]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>>[[TopCavProjectTraveler]] <<TEXT>>[[TopCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for TopCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for TopCavProjectSeqNum]] <<NOTE>> |
| **THREE CAVITY TEST** |
| **Select Position 1 Cavity:**[[CAVSNP1]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position1CavProjectTraveler]] <<TEXT>>[[Position1CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position1CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position1CavProjectSeqNum]] <<NOTE>> |
| **Select Position 2 Cavity:**[[CAVSNP2]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position2CavProjectTraveler]] <<TEXT>>[[Position2CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position2CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position2CavProjectSeqNum]] <<NOTE>> |
| **Select Position 3 Cavity:**[[CAVSNP3]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position3CavProjectTraveler]] <<TEXT>>[[Position3CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position3CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position3CavProjectSeqNum]] <<NOTE>> |

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| **VTA CAVITY TEST FINALIZED**(To Be Completed by VTA Operator)Format option 2 |
| [[VTAOperator]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>> |
| [[VTATestDdate]] <<TIMESTAMP>> |
| [[TestDewar]] {{3,4,5,6,7,8}} <<SELECT>> |
| **SINGLE CAVITY TEST** | **PAIR CAVITY TEST** | **THREE CAVITY TEST** |
| **Select Single Cavity**[[CAVSNSingle]] <<CAVSN>>*Provide Traveler AND Sequence Number for the CAVSN tested.*[[SingleCavProjectTraveler]] <<TEXT>>[[SingleCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for SingleCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for SingleCavProjectSeqNum]] <<NOTE>> | **Select Bottom Cavity**: [[CAVSNBottom]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[BottomCavProjectTraveler]] <<TEXT>>[[BottomCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for BottomCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for BottomCavProjectSeqNum]] <<NOTE>> | **Select Position 1 Cavity:**[[CAVSNP1]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position1CavProjectTraveler]] <<TEXT>>[[Position1CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position1CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position1CavProjectSeqNum]] <<NOTE>> |
|  | **Select TOP Cavity:** [[CAVSNTop]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[TopCavTraveler]] {{CHOICE1,CHOICE2,CHOICE3}} <<SELECT>>[[TopCavProjectTraveler]] <<TEXT>>[[TopCavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for TopCavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for TopCavProjectSeqNum]] <<NOTE>> | **Select Position 2 Cavity:**[[CAVSNP2]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position2CavProjectTraveler]] <<TEXT>>[[Position2CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position2CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position2CavProjectSeqNum]] <<NOTE>> |
|  |  | **Select Position 3 Cavity:**[[CAVSNP3]] <<CAVSN>>*Provide Traveler Sequence Number for the CAVSN tested.*[[Position3CavProjectTraveler]] <<TEXT>>[[Position3CavProjectSeqNum]] <<TEXT>>[[Pull all Project VTRF traveler into dropdown for Position3CavProjectTraveler]] <<NOTE>>[[Once Project is selected then fill with SeqNum and CAVSNs from that traveler into dropdown for Position3CavProjectSeqNum]] <<NOTE>> |
| **NEUTRON GENERATION DURING VTA CAVITY QUALIFICATION TESTS** |
| [[NeutronGenerated]] <<YESNO>>*Inform / send emails if YES is selected*[[VTAFacilityManager]] {{ KDAVIS,JTKENT,POWEN,TGOODMAN,HAMLETTE}} <<EMAIL>>[[VTAFacilityManager]] {{Dewar, CAVSN, NeutronGenerated,VTA test date}} <<EMAILSUBJ>>[[replace email subject with actual data from this traveler]] <<NOTE>> |
| **TEST COMPLETE? Verify all data has been entered.** |
| [[TestCompleteHoldpoint]] {{KDAVIS,JTKENT,POWEN,TGOODMAN}} <<HOLDPOINT>> |
| [[CloseTraveler]] <<YESNO>>[[THE HOLDPOINT WILL PREVENT THE TRAVELER FROM BEING ABLE TO BE CLOSED UNTIL IT IS CLEARED; DO NOT NEED ADDITIONAL QUESTION TO CLOSE TRAVELER]] <<NOTE>> |