List Of 2015 Reports

ID#	Title, First Author, and Category	Status
423	**Title:** Persistent Superconducting Joint between Bi-2212/Ag-alloy Multifilamentary Round Wires **First Author:** Chen, P.C., Applied Superconductivity Center, pengchen@asc.magnet.fsu.edu **PI:** Larbalestier, D.C.L., Applied Superconductivity Center, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation:** Yes, definitely **Director's Comments:** The development of a persistent current joint for an HTS conductor is of great significance for NMR magnet technology.	Approved
425	**Title:** Significant Enhancement of Compositional and Superconducting Homogeneity in Ti Rather Than Ta-doped Nb3Sn **First Author:** Tarantini, C., FSU-NHMFL, ASC, tarantini@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., FSU-NHMFL, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Submitted to** Appl. Phys. Lett. **Sign. Achievement:** Yes **Director's Recommendation:** Yes, definitely **Director's Comments:** This careful study of state of the art high Jc wires shows conclusively that Ti doping is better than Ta doping and explains why in terms of the site occupancy of Ti on Sn sites (Ta sits on Nb sites). Important also is that reducing the Nb:Sn ratio barely influences the Tc and Hc2 distribution.	Approved
429	**Title:** Quench Tests and “Self-Protecting” Behaviors of a 26 T 35 mm Multi-Width No-Insulation REBCO Magnet **First Author:** Kim, K., Applied Superconductivity Center, kkim@asc.magnet.fsu.edu **PI:** Hahn, S., Applied Superconductivity Center, shahn@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** Yes **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation:** Yes, definitely **Director's Comments:** A very compact, very high field, very simple, all REBCO superconducting magnet that generated 26 T and survived two quenches at full field in self-protecting mode.	Approved
450	**Title:** Magneto-Optical and SEM Study of IBAD-MOCVD-based 2G HTS Wires Under Uniaxial Tension **First Author:** Polyanskii, A.A., NHMFL, polyanskii@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Submitted to** IEEE Trans. Appl. Supercond. **Sign. Achievement:** Yes **Director's Recommendation:** Yes **Director's Comments:** A nice joint piece of work with SuperPower that shows directly the very high critical strain of REBCO tapes.	Approved
459	**Title:** Development of a Procedure to Mitigate Loss of Bi2Sr2CaCu2Ox (2212) Round Wire End Closure during Overpressure Processing of Large Coils **First Author:** Matras, M.R., ASC, Materials Science and Engineering, matras@asc.magnet.fsu.edu **PI:** Hellstrom, E.E., ASC, Mechanical Engineering, hellstrom@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation:** Yes **Director's Comments:** A nice piece of work aimed at qualifying long wire lengths during OP processsing	Approved
113	**Title:** Current Density in Superconducting CORC® Cables Exceeding 300 A/mm2 at 20 T **First Author:** van der Laan, D.C., Advanced Conductor Technologies and University of Colorado, daniel.vanderlaan@colorado.edu **PI:** van der Laan, D.C., Advanced Conductor Technologies and University of Colorado, daniel.vanderlaan@colorado.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 17 T **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** Yes **Director's Recommendation:** Yes **Director's Comments:** None	Approved

420	**Title:** Bi-2212 Round Wire for High Field, High Homogeneity Magnets **First Author:** Trociewitz, U.P., NHMFL, ASC, trociew@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, FSU, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **Highest Measured Field:** 17 T **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation:** Yes **Director's Comments:** The technology developed for the Platypus was broad and challenging, even though not yet fully proven in all respects. A major effort by Ulf and his team.	Approved
476	**Title:** Overpressure Processing of New Bi-2212 Wires Made with Different Powders **First Author:** Jiang, J., NHMFL, ASC, jjiang@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** Yes **Director's Recommendation:** Yes **Director's Comments:** The highest Jc 2212 conductros yet made have been established by close collaborations in the DOE SBIR program and FSU.	Approved
511	**Title:** Deconvolution of Vortex Pinning and Grain Boundary Blocking Effects in Biaxially Aligned Bi-2212 Round Wires **First Author:** Oz Yavuz, Y.O., FSU, yoz@asc.magnet.fsu.edu **PI:** Larbalestier David, D.L., FSU - ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
97	**Title:** HTS REBCO Twisted Stacked-Tape Cable Test at High Fields **First Author:** Takayasu, M.T., PSFC, PSFC, takayasu@psfc.mit.edu **PI:** Takayasu, M.T., PSFC, PSFC, takayasu@psfc.mit.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 17 T **UCGP:** No **VSP:** No **Accepted by** IEEE Trans. Appl. Supercond. **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
125	**Title:** High Field Performance Evaluation of New, High Strength Bi-2223 HTS Tapes **First Author:** Kitaguchi, H., National Institute for Materials Science, KITAGUCHI.Hitoshi@nims.go.jp **PI:** Kitaguchi, H., National Institute for Materials Science, KITAGUCHI.Hitoshi@nims.go.jp **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 31 T **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
191	**Title:** High Trapped Fields from Reinforced Bulk Superconductors **First Author:** Durrell, J.H., University of Cambridge, Engineering, john.durrell@eng.cam.ac.uk **PI:** Durrell, J.H., University of Cambridge, Engineering, john.durrell@eng.cam.ac.uk **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 25 T **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
226	**Title:** Greatly Enhanced Strain Margins in Strongly Reinforced Bi-2223 HT-NX **First Author:** Godeke, A., NHMFL, agodeke@magnet.fsu.edu **PI:** Godeke, A., NHMFL, agodeke@magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 31 T **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No	Approved

	Director's Recommendation: No **Director's Comments:** None	
252	**Title:** Ic Study of Thick MOCVD REBCO Coated Conductors for High Field Magnet Applications **First Author:** Xu, A.X., Texas Center for Superconductivity at the University of Houston, aixiaxu@gmail.com **PI:** Selvamanickam, V.S., Texas Center for Superconductivity at the University of Houston, Mechanical Engineering, selva@uh.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **Highest Measured Field:** 31.2 T **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
417	**Title:** Atomic-Scale Investigation of Ca Segregation at Low-Angle, Bicrystal Thin Film, [001] Tilt Grain Boundaries in YbBa2Cu3O7-δ High Temperature Superconductor **First Author:** Kametani, F, National High Magnetic Field Laboratory, Applied Superconductivity Center, kametani@asc.magnet.fsu.edu **PI:** Larbalestier, D, National High Magnetic Field Laboratory, Applied Superconductivity Center, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement: Yes** **Director's Recommendation: No** **Director's Comments:** None	Approved
418	**Title:** Composition and Connectivity Variability of the A15 Phase in PIT Nb3Sn Wires **First Author:** Tarantini, C., FSU-NHMFL, ASC, tarantini@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., FSU-NHMFL, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Published in** Superconductor Science and Technology 28/095001 **Sign. Achievement: Yes** **Director's Recommendation: No** **Director's Comments:** None	Approved
419	**Title:** Magnetization of Different Classes of High Temperature Superconductor Conductors **First Author:** Davis, D.S., NHMFL, ASC, ddavis@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
460	**Title:** Optimizing the Milling and Sintering Time to Increase Jc in K-Doped Ba-122 Superconductor **First Author:** Colon, H., ASC., UPRM - Department of Mechanical Engineering, hecivan.colon@gmail.com **PI:** Hellstrom, E.E., ASC, Mechanical Engineering, hellstrom@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
461	**Title:** Deformation Characteristics and Shear Reduction in rolled Nb3Sn Strands **First Author:** Brown, M., ASC/NHMFL, FSU, Mechanical Engineering, mdb06h@my.fsu.edu **PI:** Larbalestier, D.C., ASC/NHMFL, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
462	**Title:** Microstructural Investigation of Large Grain Nb3Sn A15 Formation in Powder in Tube Conductors for the Next Generation of Accelerator Magnets **First Author:** Segal, C., Applied Superconductivity Center, Mechanical Engineering FSU, segal@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., Applied Superconductivity Center, Mechanical Engineering FSU, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied	Approved

	Facility: Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	
467	**Title:** Test Plans Based on Finite Element Analysis of Bi-2212 Round Wire Prototype Coils **First Author:** Bosque, E.S., NHMFL, ASC, bosque@magnet.fsu.edu **PI:** Larbalestier, D., NHMFL, ASC, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
471	**Title:** Determination of Bulk and Surface Superconductivity of N2-Doped Cold Worked SRF Grade Niobium **First Author:** Chetri, S., FSU, ASC, sc13ad@my.fsu.edu **PI:** Lee, P.J., FSU, ASC, lee@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Accepted by** Proceedings of SRF2015 **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
433	**Title:** The Angular Critical Supercurrent Density in Faulty Regions of Coated Conductors **First Author:** Hu, X., FSU, NHMFL, ASC, xhu@asc.magnet.fsu.edu **PI:** Jaroszynski, J., FSU, NHMFL, ASC, CMS, jaroszy@magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Approved
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