



# Task 17.2. Review of actions and future outlook

ARIES WP17 Progress Report  
17 - November - 2020

<https://indico.cern.ch/event/975511/>

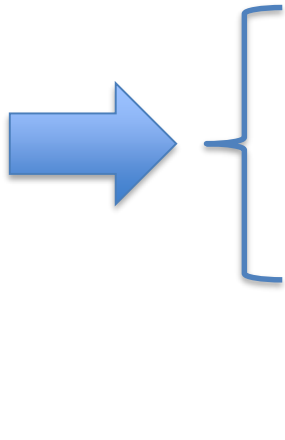
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On behalf of collimator materials R&D team at CERN

# Actions

## Status of task 17.2 (A. Bertarelli)

- Presentation summary:
  - MoGr development completed and industrialized. Production for LS2 collimators almost completed.
  - Good progress in other materials.
- **Actions:**
  - Complete thermo-mechanical and UHV characterization of graphite-carbide composite. (CERN)
  - MS61. Start preparing and ask for deadline extension



UHV CG-1100B0: to be tested  
New composites: task 14.4

Also, article from M.Portelli et al. *Thermomechanical “Characterisation of Copper Diamond and Benchmarking with the MultiMat experiment”* under peer review (3<sup>rd</sup> iteration)

MILESTONE: MS61	
Document identifier:	
Due date of milestone:	End of Month 43 (5 November)
Report release date:	2020/07/14
Work package:	WP7: Materials for extreme thermal management (EonMat)
Lead beneficiary:	CERN
Document status:	Draft (Final when fully approved)

**ABSTRACT**

One of the main objectives of the EonMat work-package is the development of advanced materials for demanding thermal management applications and high-energy particle accelerators. This document reports on the materials which were developed, produced and characterized at CERN: Smooth Bore, RHP Technology and Pallas. These can be divided into two families, that of graphite-based composites, including Multi-Matrix Carbide – Graphite (McG) and Chromium – Graphite (CGG), and that of diamond-reinforced metal composites, in particular Copper – Diamond (CuCD). Properties, physical behaviour and application domains are reviewed.

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Ongoing



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**Thank you for your attention!**