

PRESS RELEASE

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Steer-by-wire development under extreme racing conditions:*Schaeffler Paravan Technologie and Mercedes-AMG Team Mücke Motorsport continue their development cooperation in the 2022 DTM season**Photo: Gruppe C photography*

The successful development trio of Schaeffler Paravan technology, Mercedes-AMG Team Mücke Motorsport and Mercedes-AMG driver Maximilian Buhk are continuing their collaboration in the 2022 DTM season. Together, they are further developing Schaeffler Paravan's Space Drive steer-by-wire technology and will also use the findings and data from the next 16 DTM rounds to take the technology into large-scale production and thus into the OEMs' next generation of vehicles. Next weekend is the start of the season at the Autodromo Internacional do Algarve in Portimao/ Portugal. The Mercedes-AMG GT3 #18 is equipped with Space Drive digital steering technology, which means that there is no mechanical connection between the steering unit and the steering gear. This is still a dream of the future in the automotive industry, but it will be possible to do without the steering column in future generations of vehicles.

"This is what the automobile of the future will look like," says Roland Arnold, CEO of Schaeffler Paravan Technologie GmbH & Co. KG is certain. "We are writing automotive history here, because autonomous driving vehicles controlled by artificial intelligence, sensors, or ADAS systems must pass steering data digitally to the wheels and return it. We have already been testing this technology since 2019, under the tough conditions on the racetrack and since last season as part of the DTM. The motorsport test field is a proven development accelerator."

Here, the Schaeffler Paravan experts are relying on the proven team from 2021. "We are looking forward to the season, even if it will be much tougher this year," says team boss Peter Mücke. "We are virtually working on the future of the automobile and to be able to support this development makes the team proud." Mercedes-AMG Team Mücke Motorsport is responsible for the operation of the Mercedes-AMG GT3 #18 and ensures optimal performance of the racing solid. "Our main task is to collect data, which is then processed accordingly by the development engineers and later fed back into the system. And we're already at a very high level there, but that's by no means the end. The possibilities are so huge for the automotive industry, I think there's a lot more to come."

Behind the Space Drive steering unit again this year is 29-year-old Maximilian Buhk from northern Germany, an experienced GT3 specialist and key input provider. He, too, has a lot in mind this season: "That we improve on last year, that we build on what we learned last year, and of course, most of all, that we start where we left off last year, namely with a podium finish," says Maximilian Buhk. "I feel as a driver that a lot has changed in terms of technology. Of course, there are also things that don't work so well at times. That's part of the development. But it's always going in the right direction and we're constantly developing the technology."

When Maximilian Buhk brakes from over 250 km/h to well below 100 km/h in the Lagos curve on Saturday on the 4.653-kilometer circuit in the Algarve, turns in, and briefly takes his foot off the gas when accelerating out into the next curve to prevent the rear end from swerving, he has numerous "spies" on board. Highly sensitive measuring devices register steering angle, lateral and longitudinal acceleration, accelerator pedal position, speed and the driver's braking force, among other things. Over 200 parameters are constantly recorded and transferred to the Schaeffler Paravan data pool.

"We are the first to convert a steering feel into electronic signals, which are then fed back to the driver as feedback via the steering unit. This is technically very demanding and an exciting challenge for the engineers. At the end of last year, we took the collected data to the steering test bench and used it to expand our vehicle models, which are indispensable for advancing further development," says Hubert Hügler, CTO of Schaeffler Paravan Technologie GmbH & Co.KG. "We are now talking about improvements in the detail area and now it is a matter of synchronizing the tests, ideas and results that we develop on the test bench with the actual measured vehicle data in order to further develop the whole complex system. That is the goal of this year's DTM."

Since 2019, Space Drive has been successfully tested in motorsports and continuously developed further with the data collected on the race track. In the DTM, Space Drive technology has been part of the regulations since the 2021 season and is also used in other racing series and in off-road rallying. Successful racing drivers such as Bernd Schneider, Markus Winkel-hock and the reigning DTM champion of 2021 Maximilian Götz - in numerous GTC race entries - or rally driver Armin Schwarz have raised Space Drive steer-by-wire technology to a new level with the Schaeffler Paravan development team.

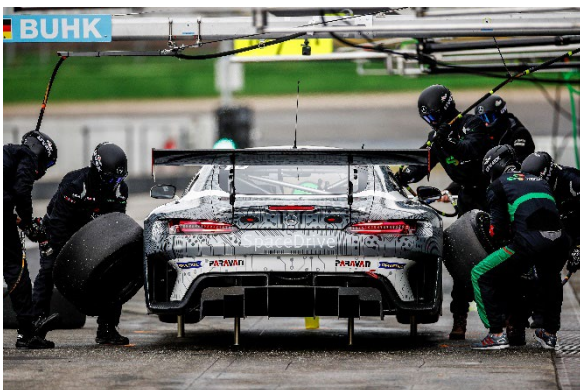
Eight race weekends are scheduled in the 2022 DTM season, with one race each on Saturday and Sunday. The season kicks off in Portimao on Friday with the 45-minute free practice sessions. On Saturday, April 30, qualifying will be contested at 10:05 a.m. for the first grid position of the season. The race then traditionally starts at 13:30. On Sunday, qualifying will also start at 10:05 a.m. for the second race of the weekend, which will then start at 1:30 p.m. Pro7 will broadcast the race live from 12:30 a.m. on Saturday and from 1 p.m. on Sunday. All training runs and races can also be seen in the livestream under [DTM Grid](#). Further dates: Lausitzring (May 21/22), Imola/Italy (June 18/19), Norisring (July 02/03), Nürburgring (August 27/28), Spa/Belgium (September 10/11), Spielberg/Austria (September 24/25) and Hockenheim (October 08/09).



The Mercedes-AMG GT3 presents itself with a fresh design update. Development carrier for the Space Drive electronic steering system and a key technology for autonomous driving. Photo: GruppeC Photography



Maximilian Buhk will also be a development driver for Schaeffler Paravan technology in the 2022 DTM season, Photo: GruppeC Photography



The Mercedes-AMG GT3 Team Mücke Motorsport supports the Space Drive development team, Photo: GruppeC Photography

Teambild



Thanks to Space Drive, the Mercedes-AMG GT3 #18 manages without any mechanical connection between the steering unit and Steering gear, Photo: GruppeC Photography



The Mercedes-AMG GT3 #18 is controlled by a force feedback steering unit via cable, so a steering column is no longer required. The technology comes from disabled mobility, field-tested and road-legal for 20 years. Photo: GruppeC Photography



*The Space Drive Team of Schaeffler Paravan and the Mercedes-AMG Team Mücke Motorsport has pushed the development of the innovative steering system over the winter and is ready for the DTM season 2022.
EN: <https://vimeo.com/702043373/8c637d8110>*

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About Mücke Motorsport:

Mücke Motorsport has been successful in international motorsport for over 20 years as well as being active in all junior areas of Formula 3, GP3 within Formula 1, DTM and ADAC GT Masters. For many years, Mücke Motorsport was active in the Red Bull Junior Team and Mercedes works team in Formula 3 as well as in the DTM. During this time, more than 150 drivers have been trained at Mücke Motorsport. In the process, 12 drivers have managed to make it all the way to Formula 1,

including Sebastian Vettel, Sergio Perez, Pascal Wehrlein, Robert Kubica, Sebastien Buemi and Lando Norris. 36 drivers have become factory drivers in various categories. 24 drivers have competed in the 24h race at Le Mans for many years and have also won various international victories. In addition to driver training, the constant innovative further development of the racing cars by the Mücke Motorsport engineering team, which also provides software solutions in the field of vehicle simulation and chassis analysis as a service provider, is a key area of responsibility for Mücke Motorsport.

About Schaeffler Paravan Technologie GmbH & Co.KG

Schaeffler Paravan Technologie GmbH & Co. KG is a company specializing in the development of fail-operational drive-by-wire systems - "Space Drive" - and chassis system solutions. It is headquartered in Herzogenaurach with an operating facility in Pfronstetten-Aichelau. Schaeffler Paravan Technologie is a joint venture (90 percent Schaeffler and ten percent Roland Arnold) and was founded in October 2018. The Space Drive system developed by Paravan founder, Roland Arnold was completely transferred to the joint venture and will be industrialized there. For future autonomous driving vehicles, Schaeffler Paravan is also developing a "rolling chassis" with intelligent corner modules - with integrated Schaeffler wheel hub motors, brakes, space drive steering (90 degrees) and suspension in one system. www.schaeffler-paravan.de