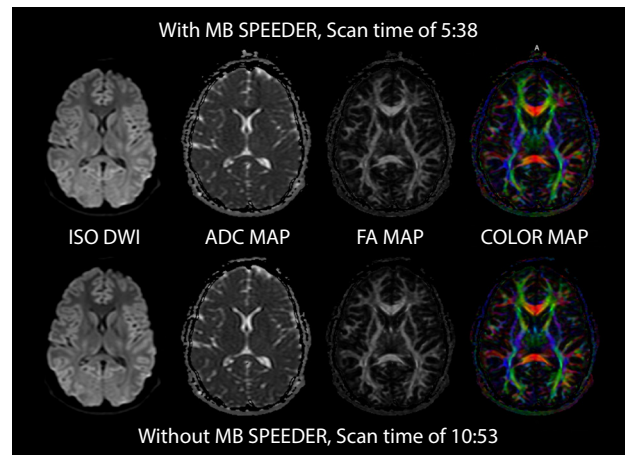
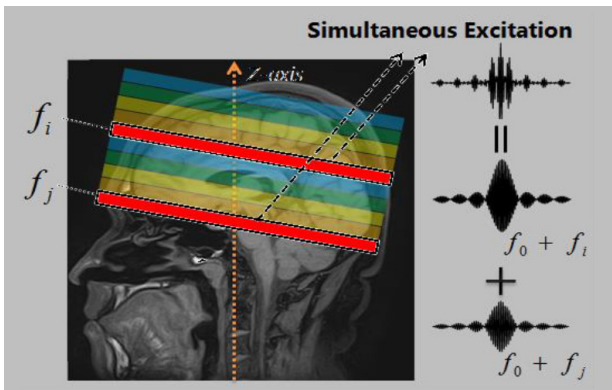


# Multiband SPEEDER (MB SPEEDER) for Time Reduction

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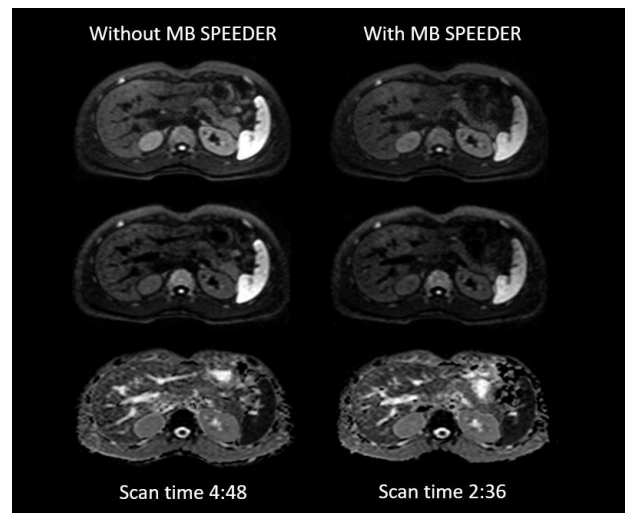
**MB SPEEDER** is an acceleration technique that allows scanning two slices simultaneously. It excites two slices (i.e., MB factor of 2) within one TR using a multiband RF excitation pulse, thereby cutting the scan time in half. MB SPEEDER maintains image quality by simultaneously exciting slices that are furthest apart to mitigate cross-talk.



This image shows a DTI scan with 48 directions. The top row uses Multiband and has a scan time of 5:38 minutes, and the bottom row shows the same scan without MB Speeder and a scan time of 10:53 minutes.

This image on the right shows an abdomen without Multiband and a scan time of 4:48 minutes, while the right side with Multiband shows a reduced scan time of 2:36 minutes.

MB SPEEDER can be used for scan time reduction in 2D SE EPI diffusion imaging and diffusion tensor tractography. The time savings can then be used to reduce the exam time or improve other parameters such as more diffusion directions or more b values.



\*For more details, please refer to the MB SPEEDER White Paper:  
<https://us.medical.canon/products/magnetic-resonance/experience/>

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