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## Investigations of the cause of unexpected intensity tail observed in the Fermi chopper spectrometer 4SEASONS

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We have introduced a new Fermi chopper with compact slit package into the direct geometry neutron spectrometer 4SEASONS in Materials and Life Science Experimental Facility at J-PARC, and succeeded in significantly improving the beam intensity compared to the old model[1]. On the other hand, the new Fermi chopper causes an unexpected intensity tail, which may adversely affect the data analysis. In order to solve this problem, we have proceeded with various inspections of a Fermi chopper blade such as Monte Carlo simulation, neutron transmission spectrum measurement and direct observation with a microscope. In this presentation, we will show some approaches taken to solve the problem and explain the rationale that led to the plausible assumption.

[1] R. Kajimoto et al., J. Phys.: Conf. Ser. 1021 (2018) 012030.

**Primary authors:** NAKAMURA, Mitsutaka (J-PARC); KAJIMOTO, Ryoichi (J-PARC); OIKAWA, Kenichi (J-PARC); SHINOHARA, Takenao (J-PARC); AIZAWA, Kazuya (J-PARC); STEFANUS, Harjo (J-PARC); IWAHASHI, Takaaki (J-PARC); KAMAZAWA, Kazuya (CROSS); IKEUCHI, Kazuhiko (CROSS); IIDA, Kazuki (CROSS); INAMURA, Yasuhiro (J-PARC); ISHIKADO, Motoyuki (CROSS)

**Presenter:** NAKAMURA, Mitsutaka (J-PARC)

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