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The Latest Total Absorption Results from MTAS[1] BERTIS RASCO, Oak Ridge National Lab, MTAS COLLABORATION — Measuring accurate total β-feeding patterns is important for understanding reactor decay heat, reactor antineutrino production, and to the freeze out component of the r process in relation to the relative abundances of elements in the galaxy. Total β-feeding patterns include all decay branches, including ground-state to ground-state decay, feeding to excited states, and β-delayed neutron branches. Over the last decade measuring β-feeding patterns using total absorption spectroscopy has become an important complement to high precision γ measurements. Total absorption spectroscopy involves detectors with extremely high efficiency which minimizes beamtime use and overcomes the pandemonium effect in order to extract total β-feeding patterns for nuclei abundantly produced in nuclear fission. It also allow extraction of the ground-state to ground-state feeding and β-delayed neutron branches. The Modular Total Absorption Spectrometer (MTAS) is the worlds largest total absorption spectrometer that is capable of extracting total β-feeding patterns. We will present new results of several nuclei that were measured at the HRIBF at Oak Ridge National Laboratory and at Argonne National Laboratory.

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