## Recent progress of compact RFP experiment in TS-4 device

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We produced a compact RFPs with R ~ 0.5m and A ~ 2.3 for the first time. It had (F,  $\theta$ ) = (-0.7, 1.4)-(-1.2, 1.8) and center q = 0.3-0.4 much larger than the conventional RFPs. We also studies axial merging of two CTs with equal toroidal fluxes for the future heating and current drive of those CTs. The axial merging doubled the toroidal flux  $\Psi$ , while it maintained the poloidal flux as it was. A new finding is that the poloidal flux as well as the n=2 mode increased by 20% right after the cohelicity merging. Since the CTs have extra toroidal flux after the merging, some dynamo activity is considered to convert the extra toroidal flux to the poloidal flux. We will present more detailed study of the dynamo activity, especially the possible relationship between the flux conversion and n-mode activities.