

# HI IM Forecasting Development: MeerKAT, FAST, BINGO and SKAI

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# 1. HI IM Development and PCA Foreground Subtraction for MeerKAT, BINGO, FAST and SKAI

In this chapter we will develop capabilities to simulate sky signals for HI, Foreground from our MilkWay Galaxy and emission from extragalactic point sources. After adding noise together with signal components of the sky, thereafter we will apply Foreground removal techniques, preferably, PCA and GNILIC to strip out contaminations and obtain the original HI sky signals.