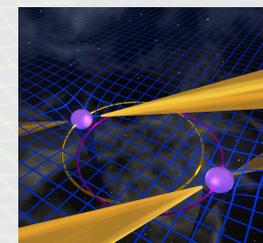




The Galactic Census of the pulsar population will enable exciting science packages, which will be based on extended and intense programs of TIMING observations

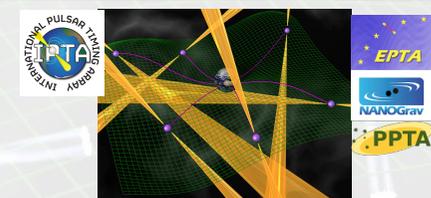
1. Finding highly relativistic systems and improving tests of gravity in the strong field regime by at least one order of magnitude



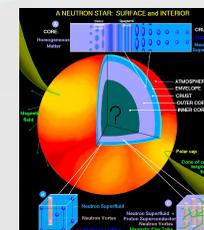
2. Finding at least one pulsar - black hole binary and informing quantum gravity



3. Detecting gravitational waves at nano-Hertz frequencies



4. Improving the mass-radius relation (NS equation of state) by more than an order of magnitude



Required time on sky (current estimates):

>≈ 40 days on SKA1-LOW and **>≈ 180 days** on SKA1-MID over 5 years