Abstract Submitted
for the DPP19 Meeting of
The American Physical Society

Coherence constraints on physical parameters at bright radio sources: pulsars and FRBs[1] MAXIM LYUTIKOV, Purdue University — Observations of high brightness temperature coherent radio emission, with brightness temperatures as high as $T_b \sim 10^{35}$ K, impose physical constraints on the plasma parameters at the emission sites, eg. some minimal plasma energy density. Additional important constraints come from the fact that resonantly emitting particles lose most of their energy to non-resonant inverse Compton and synchrotron processes. We list arguments that magnetospheres of neutron stars is the prefer loci for the generation of Fast Radio Burst.

[1]NASA, NSF, DoE

Maxim Lyutikov
Purdue University

Date submitted: 08 Jul 2019 Electronic form version 1.4