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Ivan S Gotchev* (gotchevi@ccsu.edu), Mathematical Sciences Department, Central Connecticut State University, New Britain, CT 06050. *On cardinal inequalities involving the weak Lindelöf degree.* Preliminary report.

In 1977, Bell, Ginsburg and Woods proved that if X is a normal T_1 -space, then $|X| \leq 2^{\chi(X)wL(X)}$ and noticed that the same inequality is not always true for Hausdorff spaces, so they asked if the same inequality is true for every regular T_1 -space. They also showed that not every completely regular space X satisfies the inequality $|X| \leq 2^{\psi(X)t(X)wL(X)}$ and asked if the later inequality is true for normal T_1 -spaces.

Trying to answer the above two (still open) questions, for a variety of classes of topological spaces X , Dow and Porter (in 1982), Gotchev, Tkachenko and Tkachuk (in 2016), and Bella and Carlson (in 2016), among others, proved interesting cardinal inequalities involving the weak Lindelöf degree.

In this talk, among other results, the following cardinal inequalities involving the weak Lindelöf degree will be presented, which shed light on the above-mentioned two open questions and generalize previously-known inequalities.

a) If X is a Hausdorff space which is locally H -closed (locally compact), locally Lindelöf or has a regular G_δ -diagonal, then $|X| \leq wL(X)^{\chi(X)}$;

b) If X is a Hausdorff space with a π -base whose elements have compact closures, then $|X| \leq 2^{\psi_c(X)t(X)wL(X)}$. (Received September 26, 2017)