Current Gamepress DPS considers CDWS (Charge move Damage Window Start), but only for one bar move.

I'll derive modified DPS and derive Enemy DPS E_{DPS}over which DP (Dark Pulse) performs better than SB (Shadow Ball), and compare it with Pokebattler simulation.

So modified DPS DPS_m is the DPS after we consider DPS loss because Darkrai faints while it trying to use charge move. So we need to subtract Cmove damage CD_{mg}, but before it we need to divide it by Survival Time ST, as we are calculating DPS, not damage. And as it happens on certain times, we need to multiply the odds before subtraction. The odds is fraction that Darkrai is trying to use Cmove while it's living, which means CDWS multiplied by number of cycles nC and divided by ST. Also we need to multipy it by $1/nC$ as it happens only for the last Cmove.

$$\begin{aligned} DPS_m &= DPS - \frac{CD_{mg}}{ST} * \frac{CDWS * nC}{ST} * \frac{1}{nC} \\ &= DPS - \frac{CD_{mg}}{ST} * \frac{CDWS}{ST} \\ &= DPS - \frac{CD_{mg} * CDWS}{ST^2} \end{aligned}$$

I took DPS from Gamepress comprehensive DPS chart, 27.461 for S/SB (DPS^{SB}) and 26.695 for S/DP (DPS^{DP}). (I set enemy pokemon type as Psychic to get SE DPS)

For CD_{mg} I used formula from https://gamepress.gg/pokemongo/tdo-how-calculate-pokemon-ability-outdated. It says outdated but I couldn't find most recent one.

So from the Pokemon GO damage formula,

$$D_{mg} = Floor\left(\frac{1}{2} Pow * \frac{CATK}{CDEF} * Multipliers\right) + 1$$

Floor function makes equation cumbersome so they removed it and instead subtracted $\frac{1}{2}$. Pokemon GO Current ATK and DEF formular are $CATK = (ATK + ATK_{IV})\,CPM$ and same for CDEF. As we are calculating ratio of L40 pokemons ATK/DEF, we can cancel CPM here. Also they assumed Enemy $(DEF_{Base} + DEF_{IV})$ is 200. For multipliers, we consider Cmove STAB bonus $STAB_C$ (1.2) and Cmove Super Effectiveness SE_C (1.6). And we assume ATK IV 15, as in Gamepress DPS chart. Base attack ATK for Darkrai is 285.

$$\begin{aligned} CD_{mg} &= \frac{1}{2} CPow * \frac{ATK + 15}{200} * STAB_C * SE_C + \frac{1}{2} \\ CD_{mg}^{SB} &= \frac{1}{2} * 100 * \frac{285 + 15}{200} * 1 * 1.6 + \frac{1}{2} = 120.5 \\ CD_{mg}^{DP} &= \frac{1}{2} * 80 * \frac{285 + 15}{200} * 1.2 * 1.6 + \frac{1}{2} = 115.7 \end{aligned}$$

CDWS is 2.4s for SB ($CDWS^{SB}$) and 1.4s for DP ($CDWS^{DP}$).

ST is HP/E_{DPS}, and Pokemon go HP formula is simply $HP = Floor\,\{(STA + STA_{IV})\,CPM\}$, where CPM is CP Multiplier. CPM for L40 is 0.7903 (https://gamepress.gg/pokemongo/cp-multiplier). Base Stamina STA for Darkrai is 172. And we again assume 15 STA IV.

$$\begin{aligned} ST &= \frac{HP}{E_{DPS}} \\ HP &= Floor\,((172 + 15) * 0.7903) = 147 \end{aligned}$$

Actually ST should also depend on our DPS as boss gets energy from our attack but we assume that effect is negligible.

Now we have everything, so solve forE_{DPS} where $DPS_m^{DP} > DPS_m^{SB}$ and plug in numbers.

$$\begin{aligned} DPS_m^{DP} &> DPS_m^{SB} \\ DPS^{DP} - \frac{CD_{mg}^{DP} * CDWS^{DP}}{ST^2} &> DPS^{SB} - \frac{CD_{mg}^{SB} * CDWS^{SB}}{ST^2} \\ DPS^{DP} - \frac{CD_{mg}^{DP} * CDWS^{DP}}{\left(\frac{HP}{E_{DPS}}\right)^2} &> DPS^{SB} - \frac{CD_{mg}^{SB} * CDWS^{SB}}{\left(\frac{HP}{E_{DPS}}\right)^2} \\ E_{DPS} &> HP\sqrt{\frac{DPS^{SB} - DPS^{DP}}{CD_{mg}^{SB} * CDWS^{SB} - CD_{mg}^{DP} * CDWS^{DP}}} \\ &> 147\sqrt{\frac{27.461 - 26.695}{120.5 * 2.4 - 115.7 * 1.4}} \\ E_{DPS} &> 11.4065 \end{aligned}$$