Introduction

The AI's logic for if it should switch out mid turn is for the most part relatively straightforward. For logic on what a standard switch is, refer to the normal switching logic doc.

If the pokemon is trapped, it will not attempt to switch out. Due to an oversight Arena Trap is seen as trapping even flying types and levitate, so the AI will not attempt to switch out ever in those cases despite being capable of doing so. It can be trapped due to an effect such as the Wrap, Mean Look, or Ingrain moves, or the Shadow Tag, Arena Trap, or Magnet Pull abilities. It does only care about Magnet Pull if a steel type.

The AI will also never try to switch out if it is its last pokemon.

There is an important flaw in this, several parts of this logic reference the last move a pokemon was hit by. The code to store this data is broken. When using a two turn move such as dig, it is stored on both turns so the AI will see the dig even before it hits. More significantly, the AI forgets this move treating itself as if it has not been hit every time it takes an action.

Basic Checks

Next the AI checks four primary criteria for determining if it should switch out.

The first is Perish Song, if possible it will always switch out of Perish Song on the turn before it would get KO'd due to it. This is a standard switch.

The second checks are for Wonder Guard, this is slightly more complicated. If it is a double battle, it will not switch out due to Wonder Guard. It will only attempt to switch out due to Wonder Guard if it lacks any super effective moves, this includes status moves with super effective typing.

If the pokemon does lack any super effective moves, it will loop over every move of every pokemon it can switch in, and for any move that is super effective it will have a 2/3 chance of switching in that pokemon. This means if a pokemon has multiple super effective move the chance is checked for each move.

The next check is to do with type absorbing abilities. If the pokemon has a super effective move it will have a 2/3 chance of skipping this step, it will also skip this check if it has not yet been hit with a move in battle or the last move it was hit with was a status move. Assuming none of those criteria are met it will continue with the check, it looks for the ability that absorbs the type of the last move it was hit with. So Volt Absorb for electric, Flash Fire for fire, and Water Absorb for water, if it has that ability itself or the move is none of those types it will stop with the check.

Once it has decided to look for an ability it will check all of the pokemon it can switch in, if a given pokemon has that ability it will switch it in 50% of the time.

The fourth check is for Natural Cure. It will only attempt this switch if it has Natural Cure, at least 50% HP, and is asleep. If it meets those criteria and it has either not been hit with a move yet this battle or the most recent move it was hit by was a status move, it has a 50% chance of attempting a standard switch.

If the last move it was hit by was a damaging move, iterate over every pokemon it can switch in, if that pokemon would resist or be immune to the move and that pokemon has a SE move then switch it in, prioritizing immunity over resist. If there are no allies that would resist or be immune to the move that have a SE move, or the chance failed, then there is a final 50% chance to just attempt a standard switch.

Secondary Check

Assuming all four of the primary checks failed there is a final set of checks to determine whether the AI should switch out their pokemon. There are four smaller steps to check.

First, for every move the pokemon has that is SE on an opponent, there is a 90% chance to not switch. This is checked twice if the move is SE on both pokemon in a double battle.

Second, if the pokemon has a total of +4 stages or higher between all stats that they have boosted stages in, do not switch.

Third, if the previous move the pokemon was hit by was a status move, or it hasn't been hit by a move yet, do not switch.

Fourth, if both of the above failed check every pokemon that could be switched in, if it would be immune there is a 1/2 chance to switch in the pokemon. If the possible pokemon only resists and was not immune it is a 1/3 chance to switch it in. If the possible pokemon would have no SE moves this check is skipped. Levitate and Wonder Guard should be seen at this step, but not Volt Absorb, Water Absorb, or Flash Fire.

Analysis

The natural cure scenario is so specific as to almost never happen, perish song is obvious, and wonder guard is not really used in EK, leaving only two major cases. The AI should only ever switch in a new pokemon when it is hit by a move that an ally has an absorbing ability for, or rarely if an ally resists or is immune to the move and it is not significantly boosted. The chance is drastically higher if the pokemon currently has no moves super effective on you, as even one SE move and a resist being switched in has only about a 3% chance. If the AI has two SE moves it is around a 0.3% chance.

More usefully potentially is that it should never switch out the very first turn it's out, it has to be hit by a damaging move first. Relatedly, it should almost never switch out if it is slower due to the forget on action bug. If it acts second, then it forgets what move you used after you have used it but before the new turn, if it acts first then the forgetting is performed before you use your new move, so whatever you use will be actually checked.

Arena Trap preventing switches even on Flying types and pokemon with Levitate is slightly notable, but difficult to exploit due to switches being so rare to start with.