**Large Single Aisle Mission**

https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9813859

Thoughts on some of this:

* Cruise altitude/MN – Can be optimized, can fly faster to evaluate – Probably want to fly slower, maybe really slow really low (Gnadt)
* Takeoff time – Variable 45 seconds to 2 mins depends on how you want to assume it
  + This actually matters for defining C-RATE of battery
  + Technically engines are generally rated for like 5 minutes max power
  + Need more due to missed approach
* Taxi times – 12-15 is a better global average… maybe don’t need to carry it (Tug, ground power unit?)
* Reserve cruise segment at optimal altitude potentially (whatever we say)
  + Batteries have a really hard time to do this….200 nmi is a LOT when the aircraft can only fly 600…plus 20% SOC margin…plus fade…Yeesh!
* 30 minute hold negotiable? Next Gen?
* Payload @ design mission -- ~153 pax @ 220 lbs/pax (A320neo: 15,309 kg)
  + Batt volume: Limited cargo hold?
  + Maybe remove LD3-45s and cut everyone baggage by 40 lbs?
* Range: 3400 nmi base mission, what level of reduction is acceptable? 800 nmi?
* MTOW: Can we increase? How much? What are the ground rules?

A diagram of a graph

Description automatically generated