

The supersymmetric Higgs boson(s)

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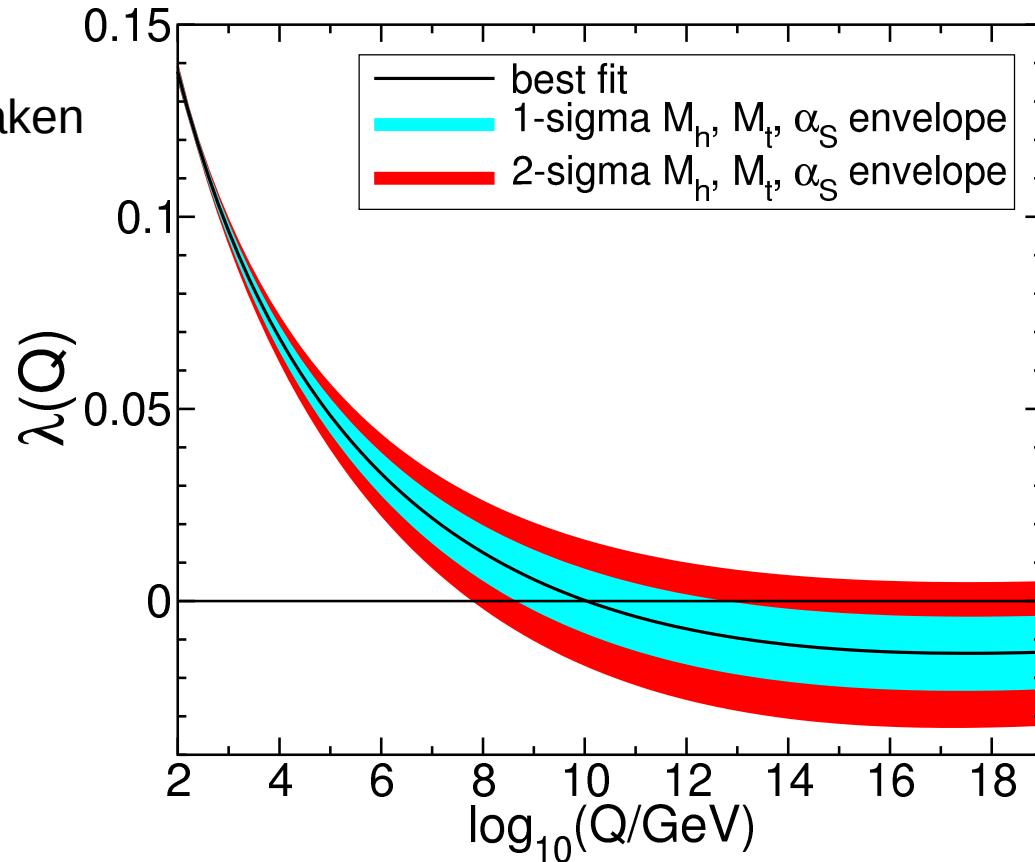


Overview

- Lecture 1: Basic SUSY Higgs properties
- Lecture 2: Searching for SUSY Higgse
- Lecture 3: SUSY Higgs and precision computations

Part 3: precision electroweak computations in supersymmetric theories

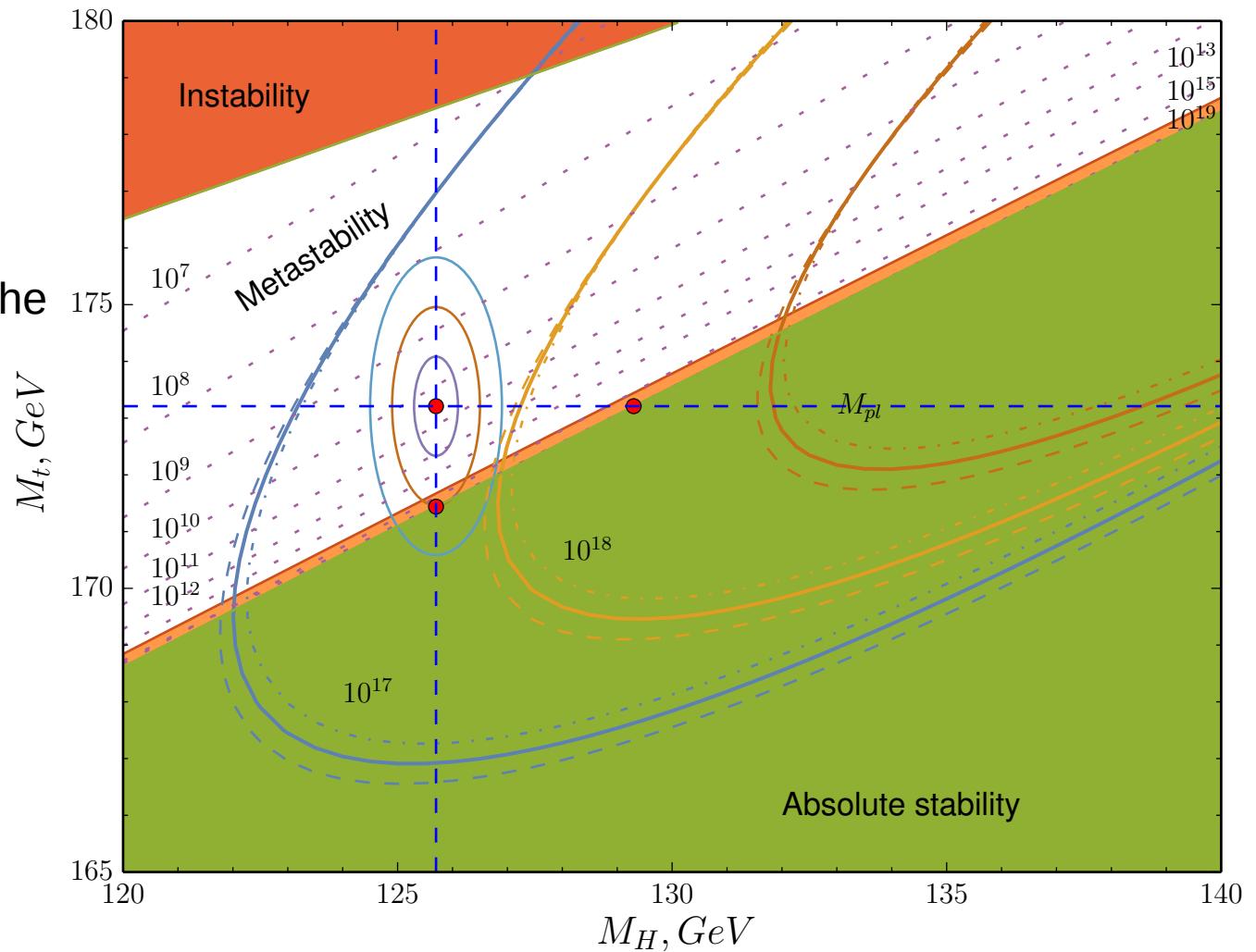
SM quartic coupling, taken
from Martin and
Robertson, 2019:



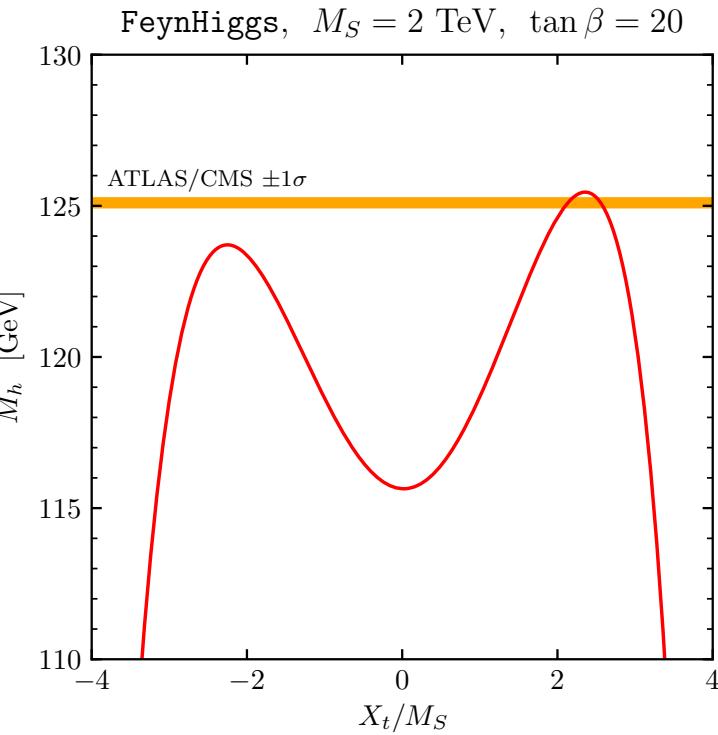
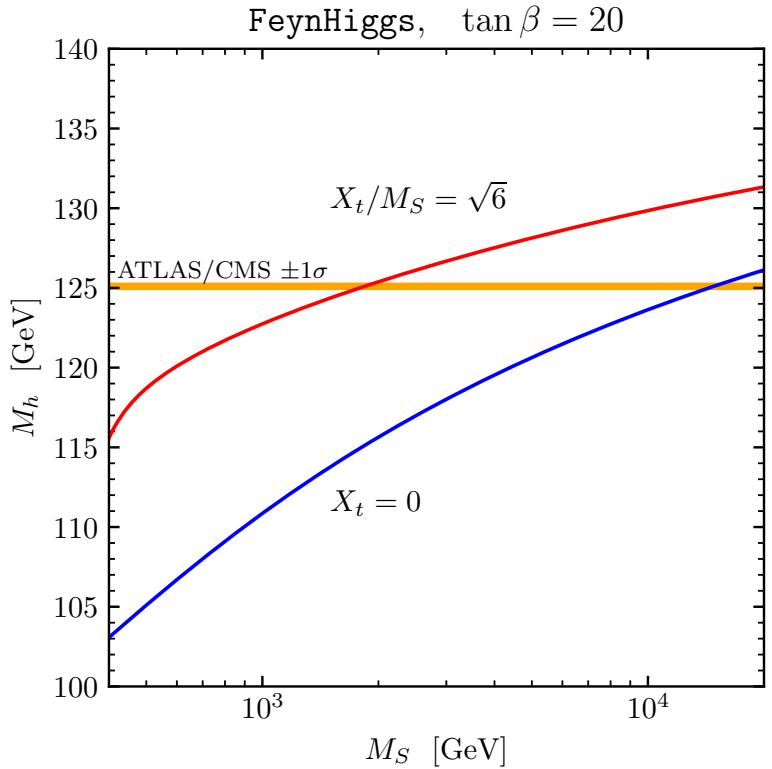
Biggest source of
uncertainty is the
top quark mass

SM stability

Taken from the website of the
code MR:
<http://apik.github.io/mr/>



Computations of the MSSM Higgs mass

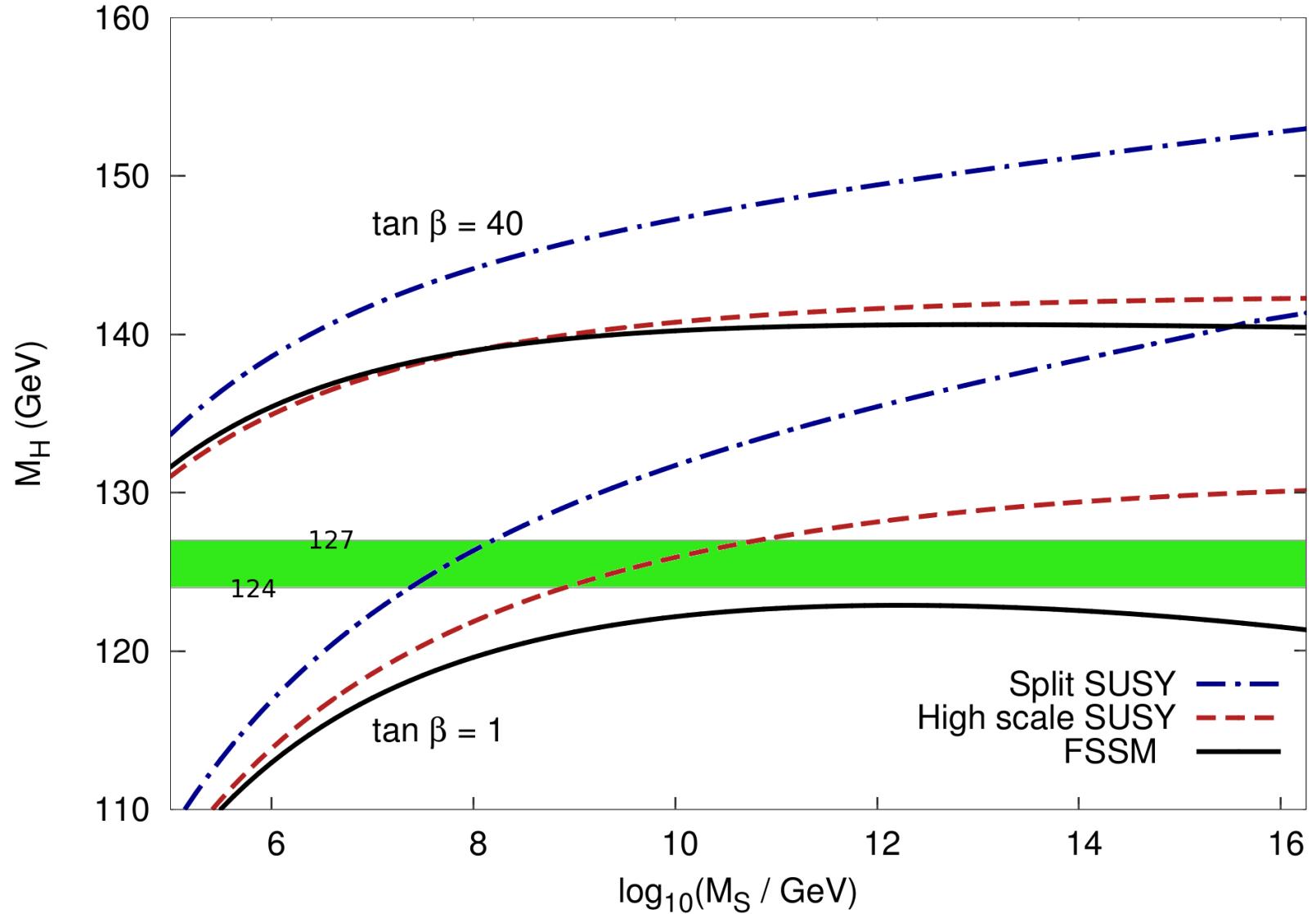


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Predictions for the Higgs mass in different SUSY scenarios

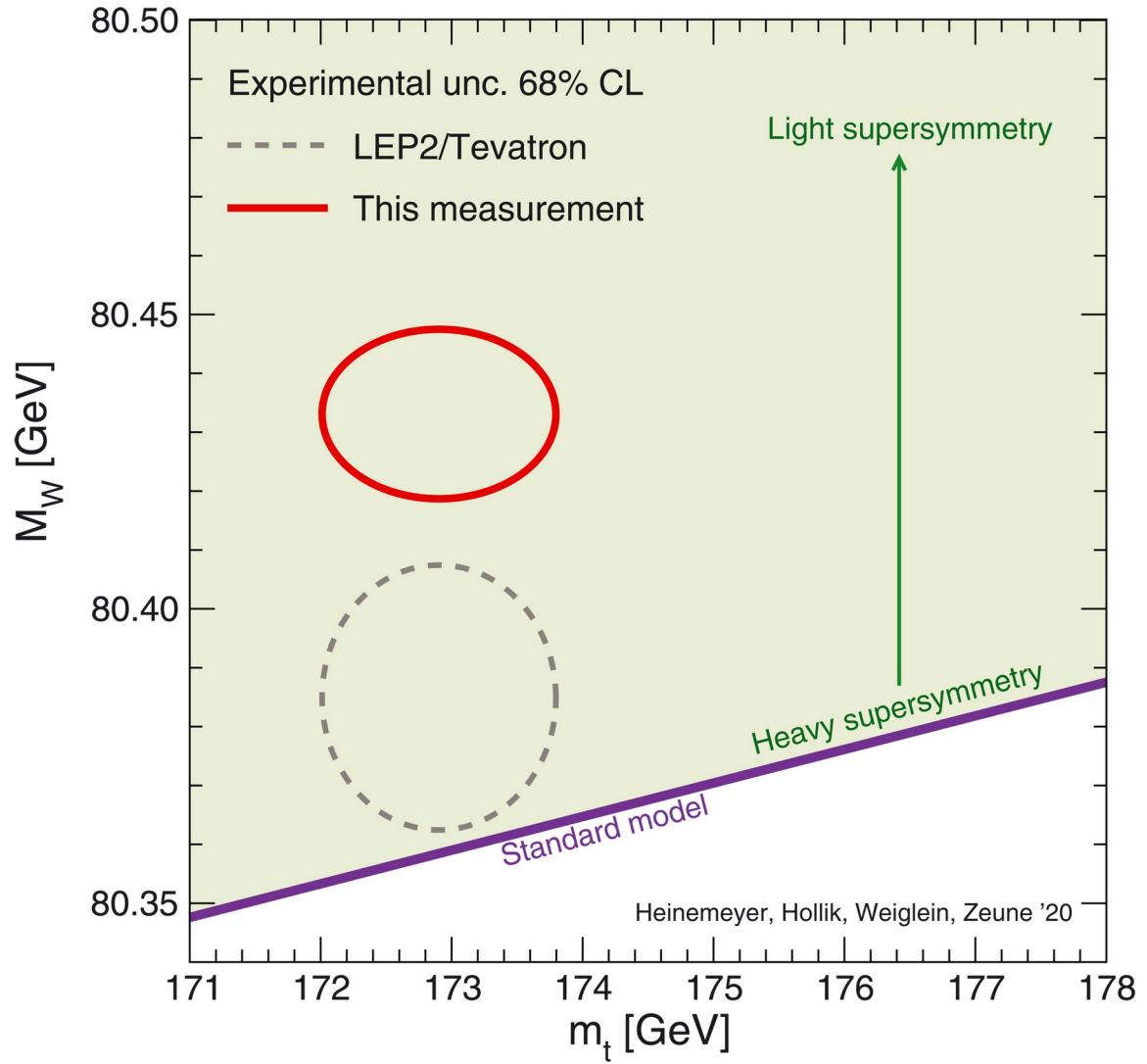
The Higgs mass
can be used to
put an upper
limit on the
SUSY scale!

OR: the Higgs
mass is exactly
in the range that
SUSY
predicts ...



W mass predictions:

But see the next talk for recent combinations in the MSSM taking all constraints into account



Other SUSY models are available!

Here I give some predictions for the W mass in the MDGSSM

