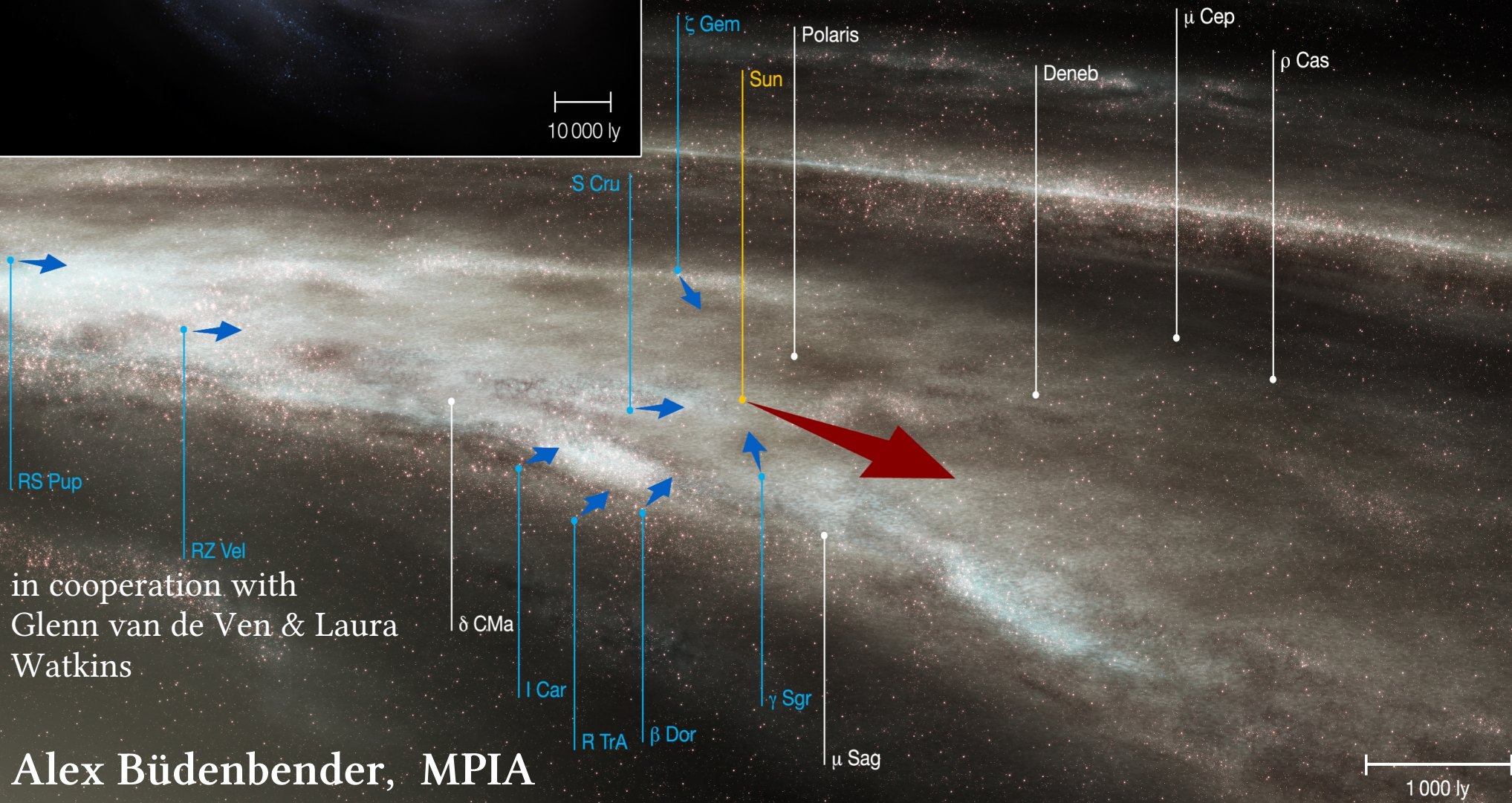
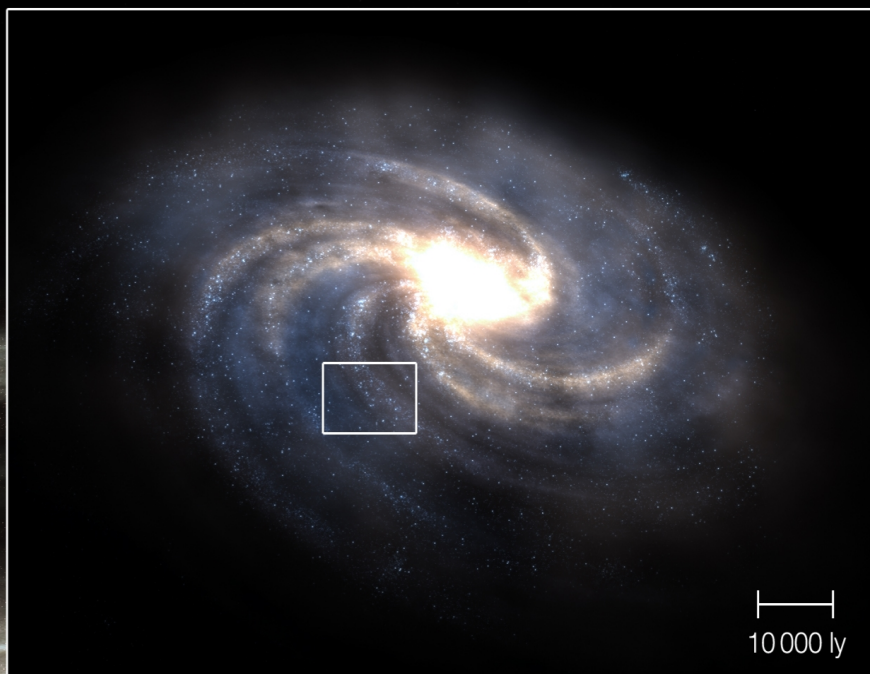


# From vertical to axisymmetric Jeans modelling in the solar neighbourhood



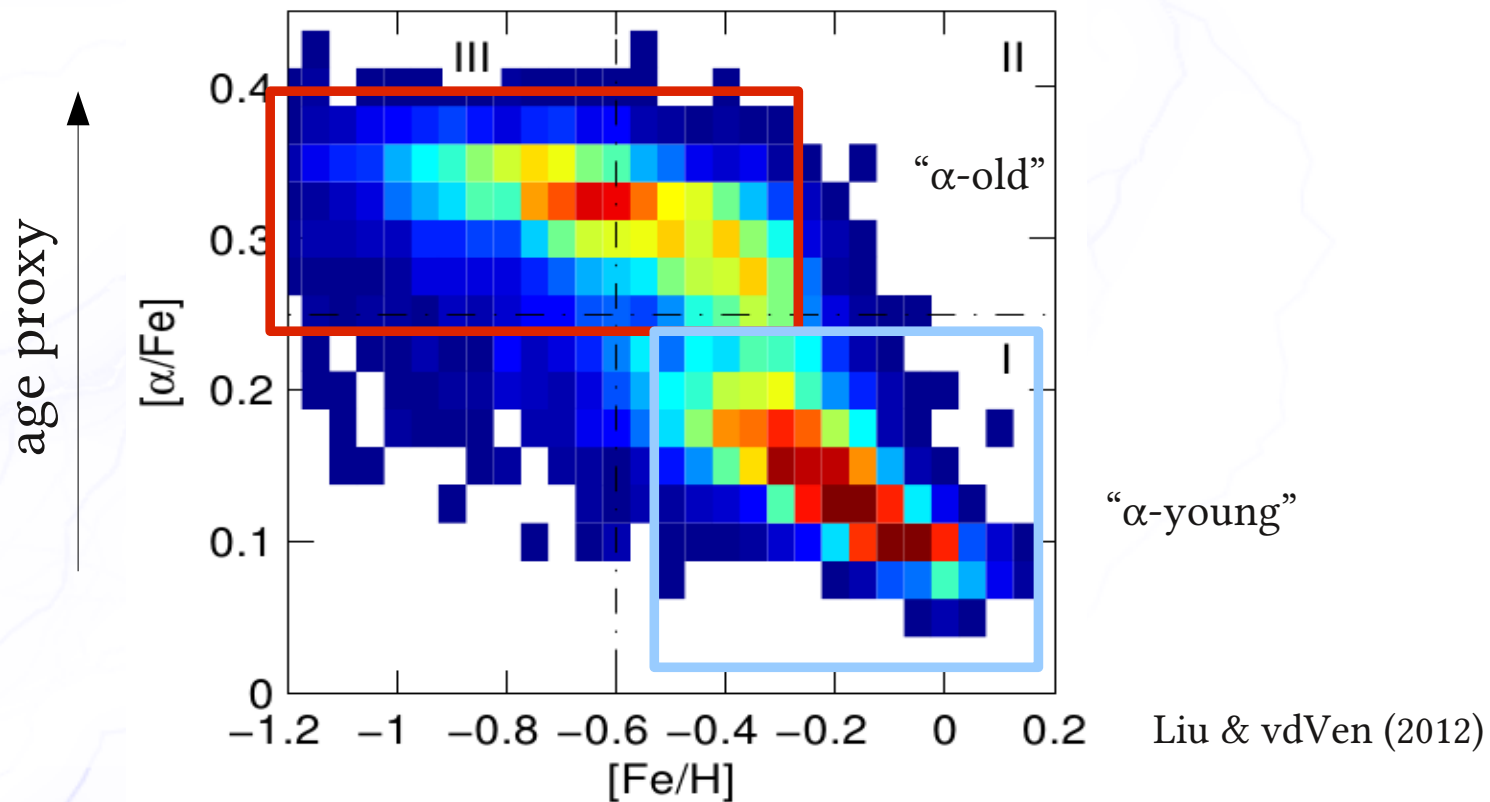
in cooperation with  
Glenn van de Ven & Laura  
Watkins

Alex Büdenbender, MPIA



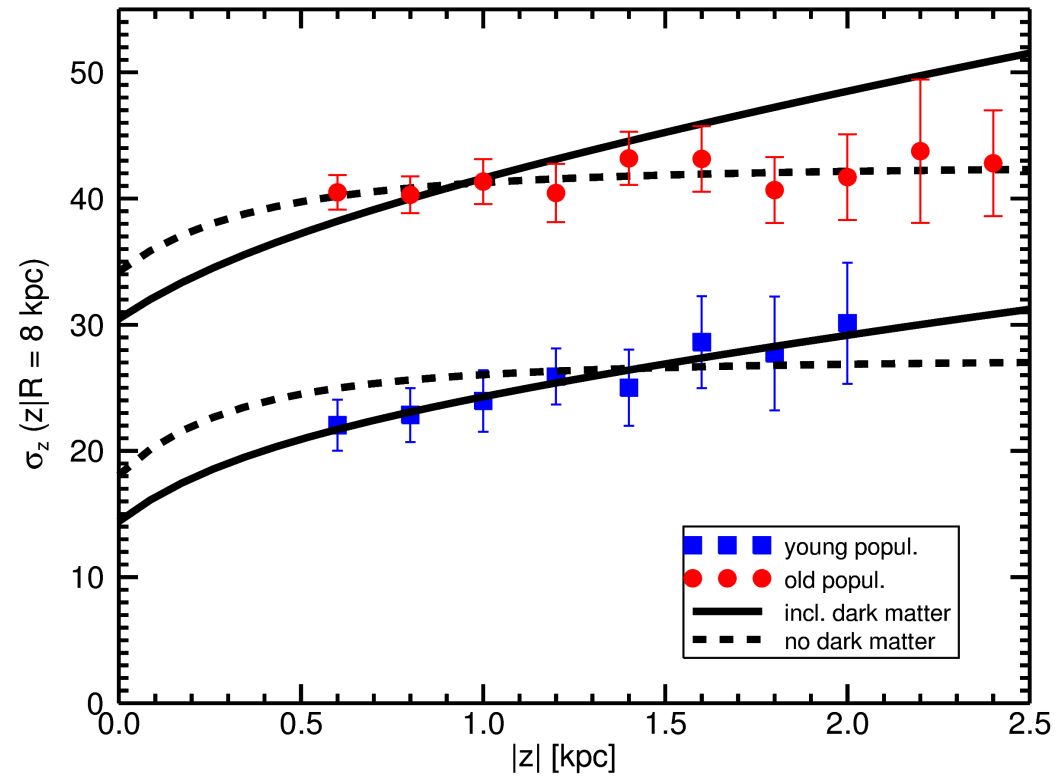
# Milky Way Potential

- Aim: Milky Way potential, including local dark matter fraction
- Tracers: ~14,000 G-Dwarfs from the SEGUE Survey  
 $7 \text{ kpc} < R < 9 \text{ kpc}$ ,  $0.5 \text{ kpc} < |z| < 2.5 \text{ kpc}$



# Vertical Jeans Model

- *Tracer density*: exponential scale height
- *Potential*: stellar exponential thin & thick disk + constant DM density
- *Assumption*: vertical and radial motion decoupled  
...zero tilt angle



# Tilting of the velocity ellipsoid

- no cylindrical alignment of the velocity ellipsoid
- axisymmetric Jeans models with non-zero tilt angle
- *Future:* Schwarzschild models without assumptions on the velocity ellipsoid

