

Meteor Velocity Distribution from CILBO Double Station Video Camera Data

E. Drolshagen, T. Ott, D. Koschny,
G. Drolshagen, B. Poppe

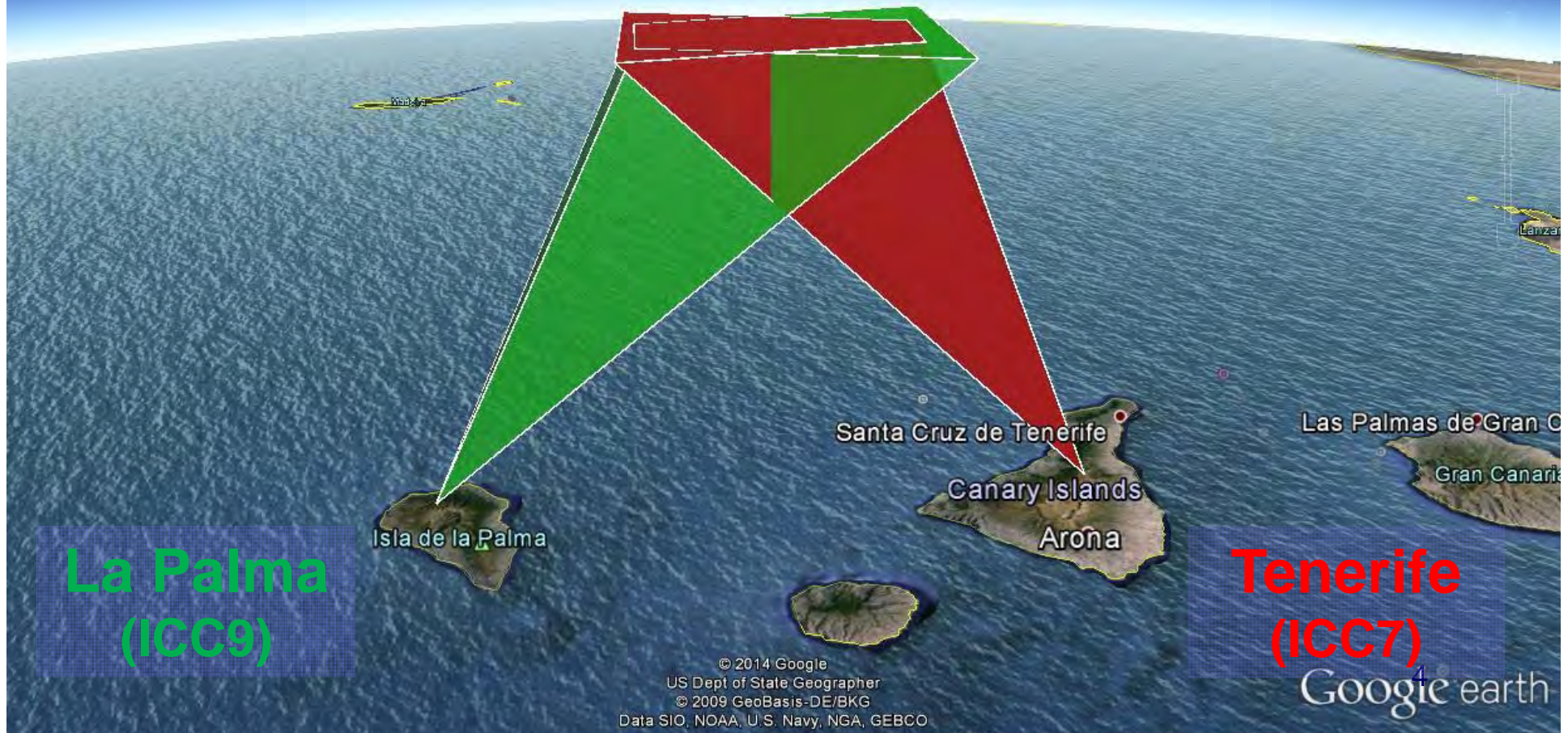
Table of Contents

- **Velocity Distribution**
- **Stream Velocity**
- **Apex Contribution**
- **Conclusion and Outlook**

Table of Contents

- **Velocity Distribution**
- Stream Velocity
- Apex Contribution
- Conclusion and Outlook

June 2013 – May 2014



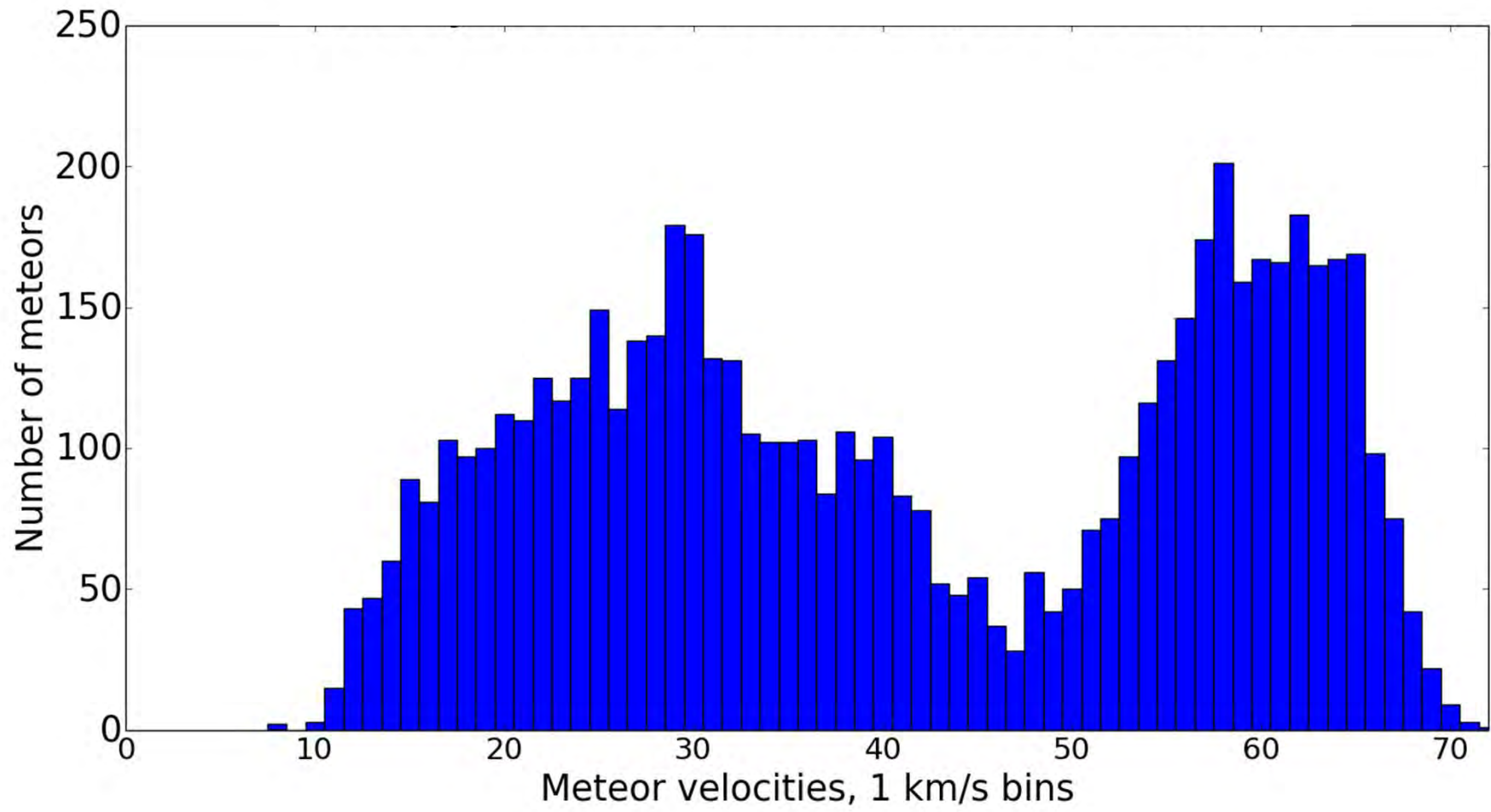
ICC9

ICC7

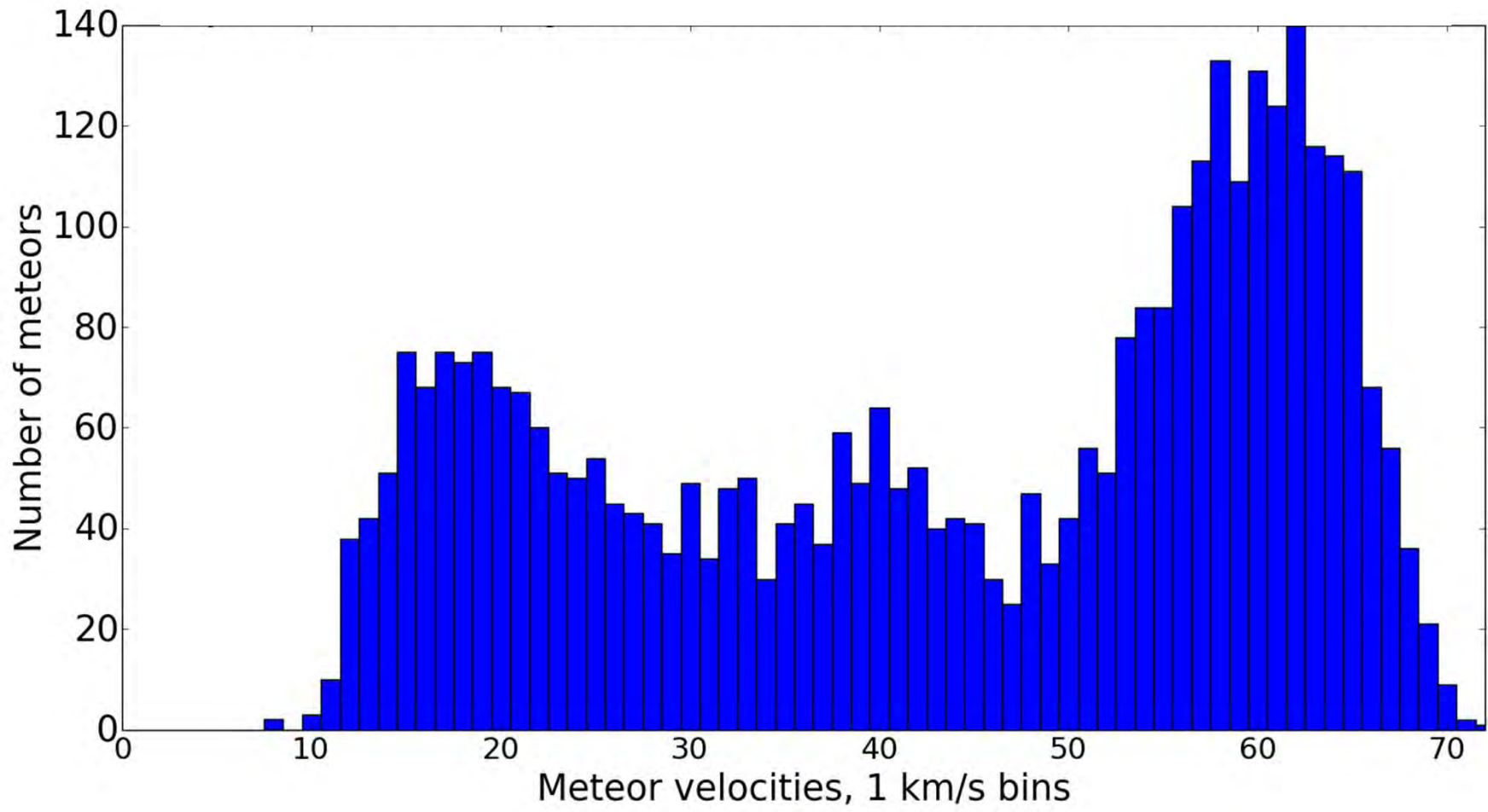


Meteor Orbit and Trajectory Software

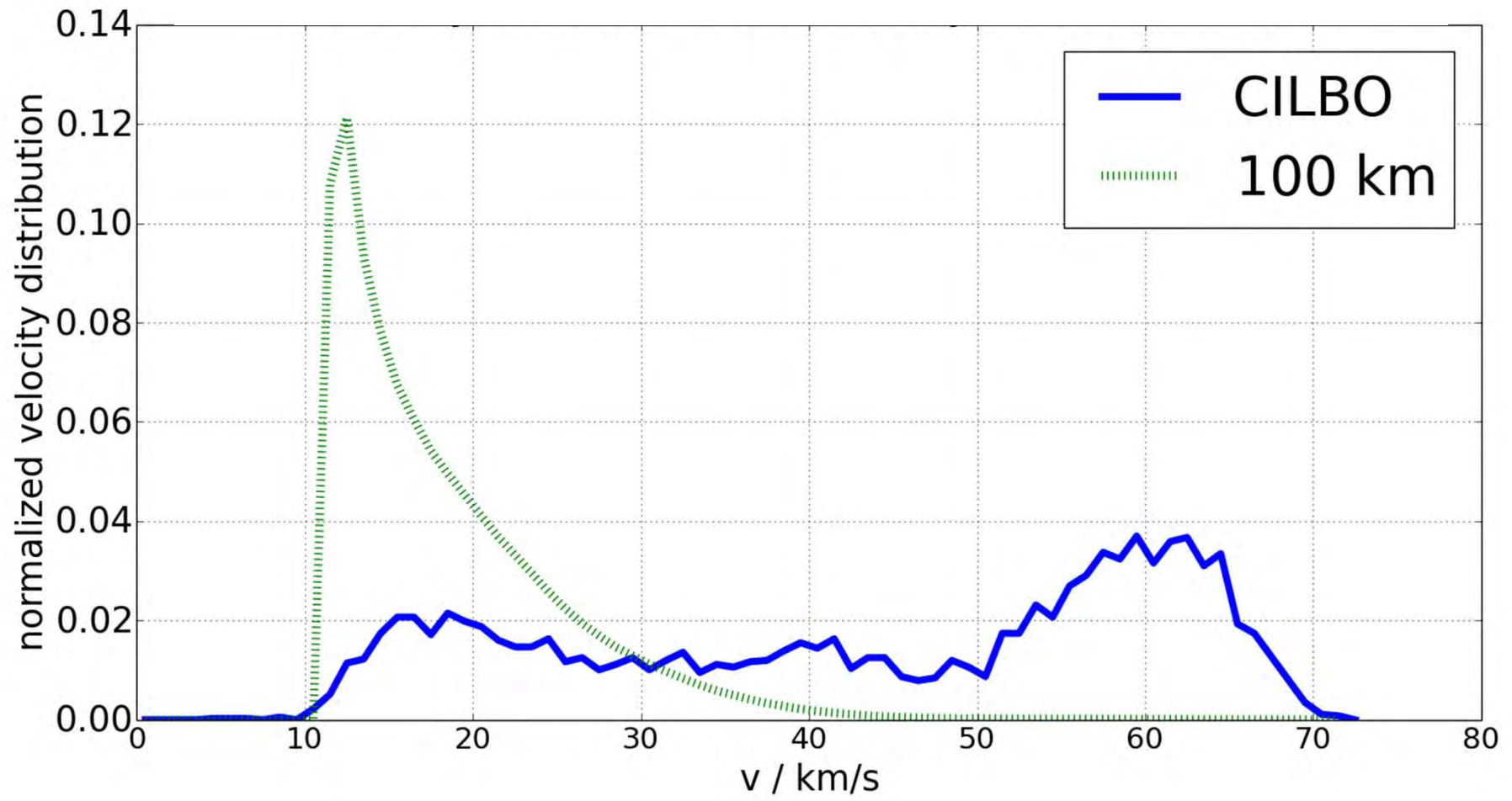
Velocity Distribution All Meteors



Velocity Distribution Sporadics



Velocity Theory



Velocity Distribution Sporadics, Masses > 0.5g

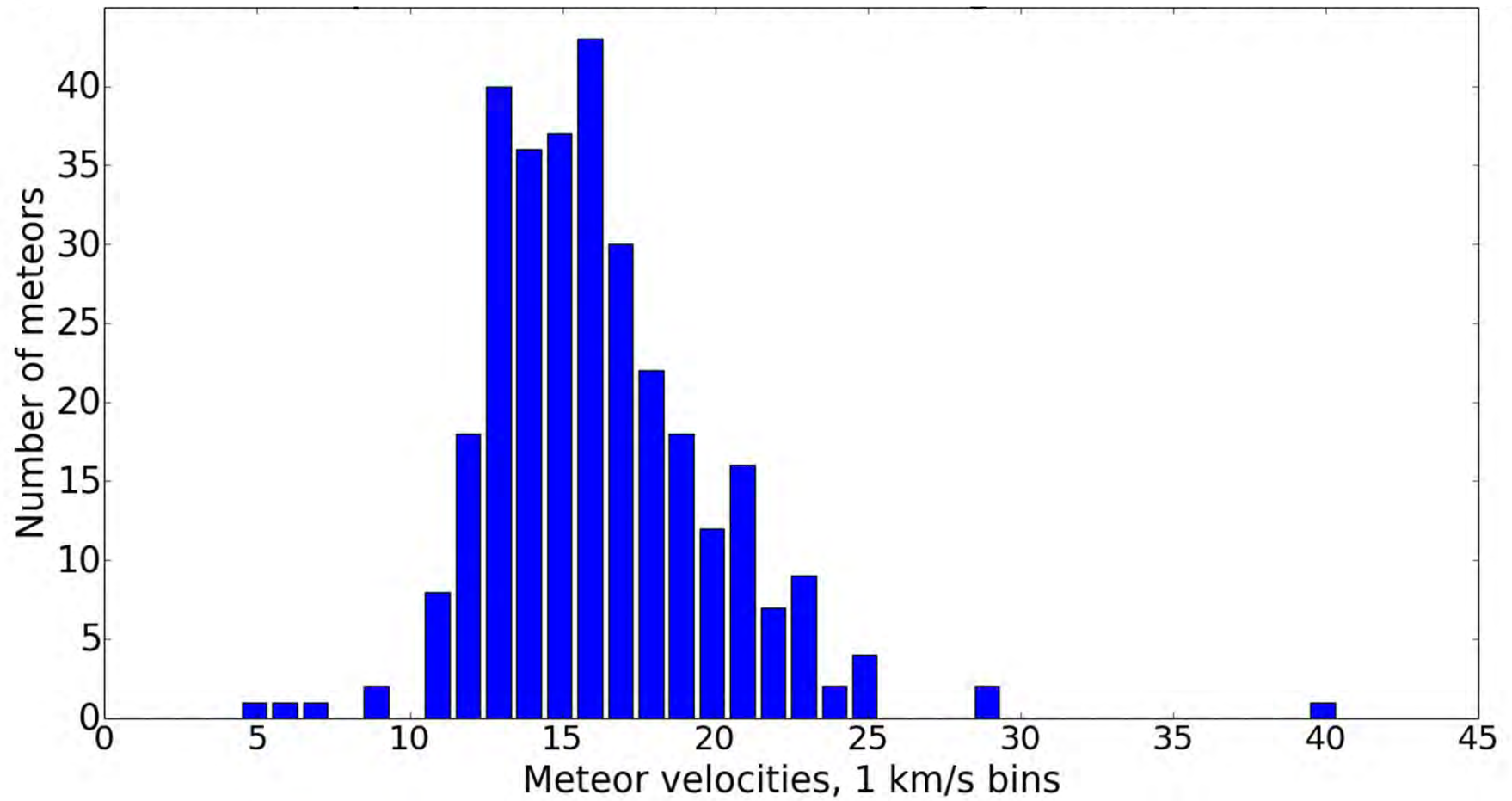
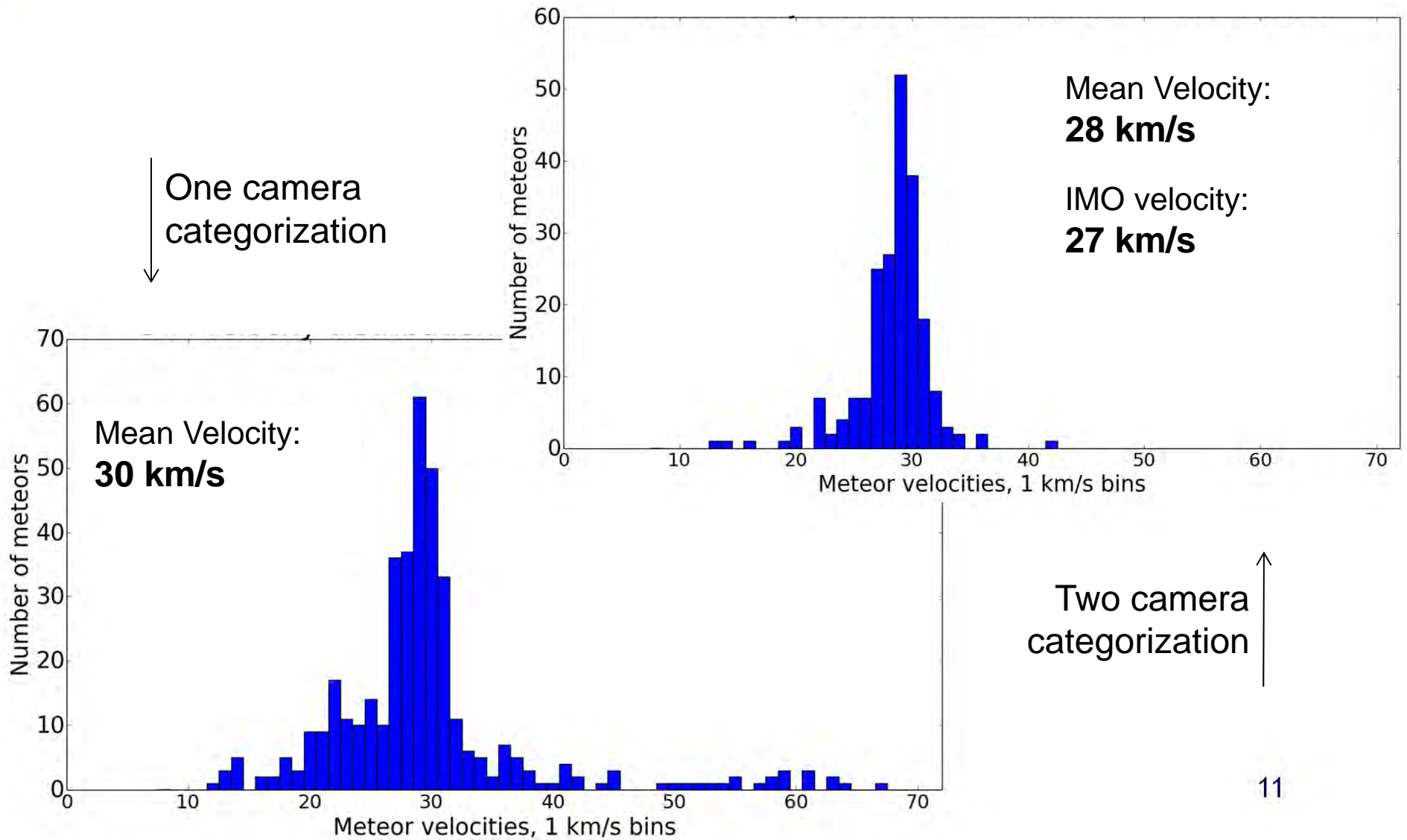


Table of Contents

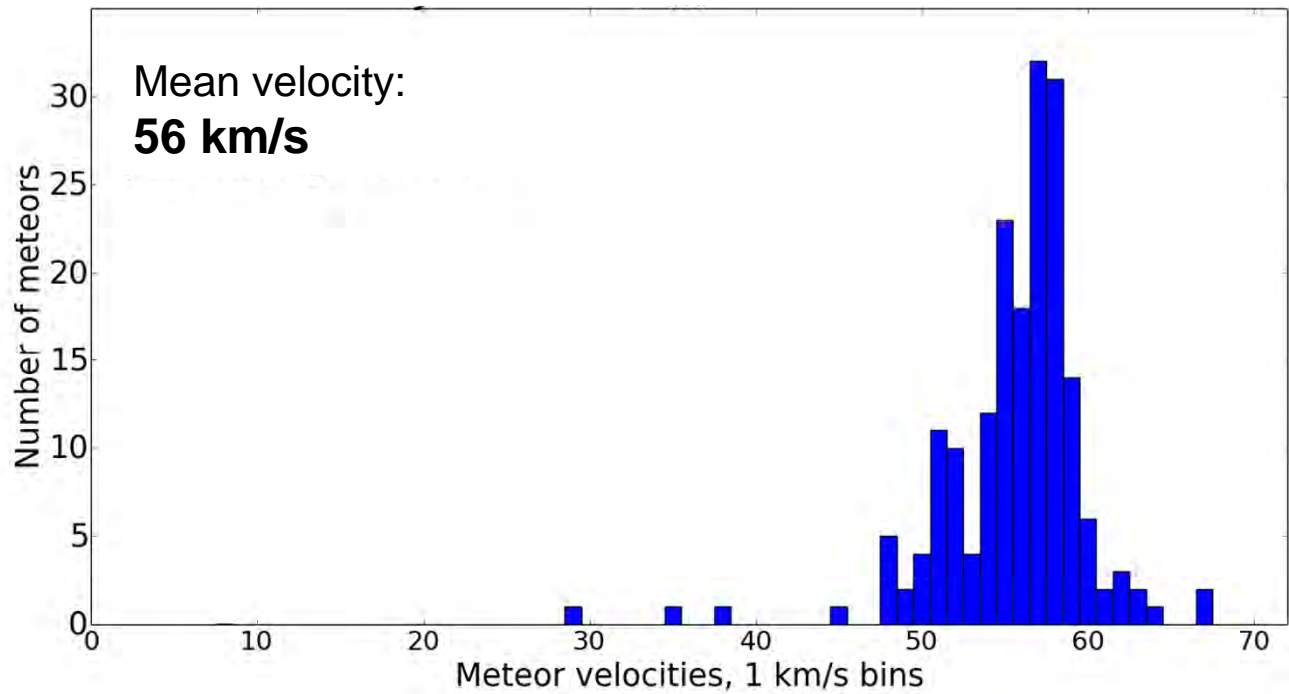
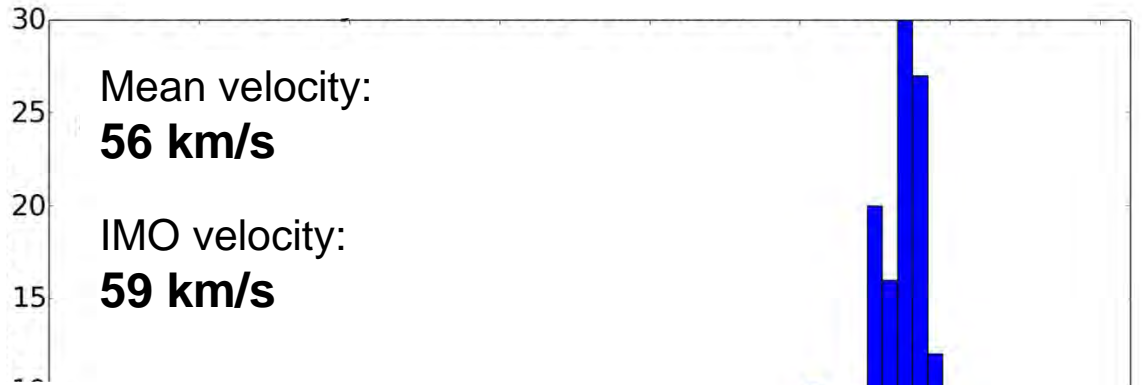
- Velocity Distribution
- **Stream Velocity**
- Apex Contribution
- Conclusion and Outlook

Velocity Distribution Southern Taurids



Velocity Distribution Perseids

One camera categorization
↓

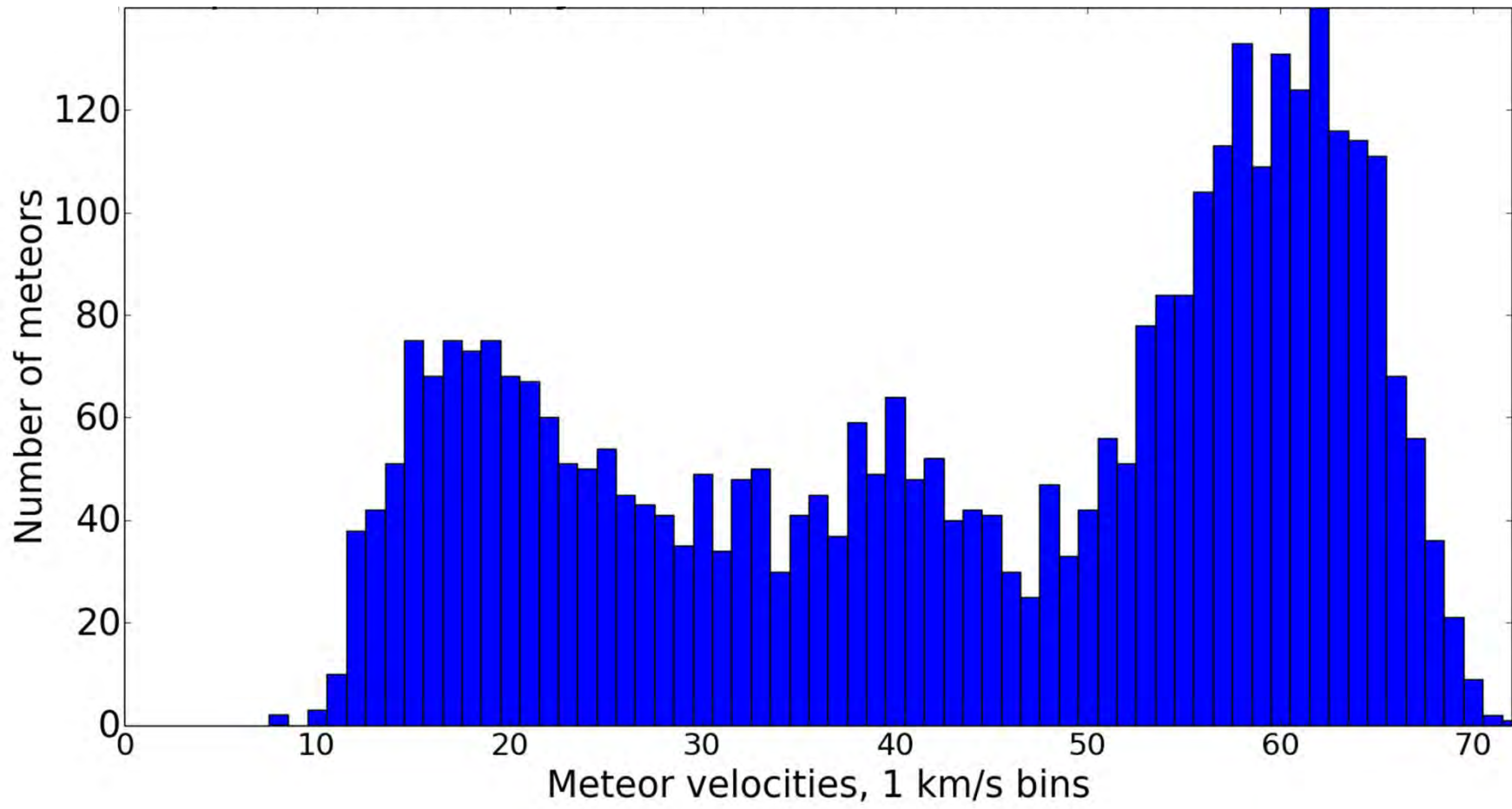


Two camera categorization
↑

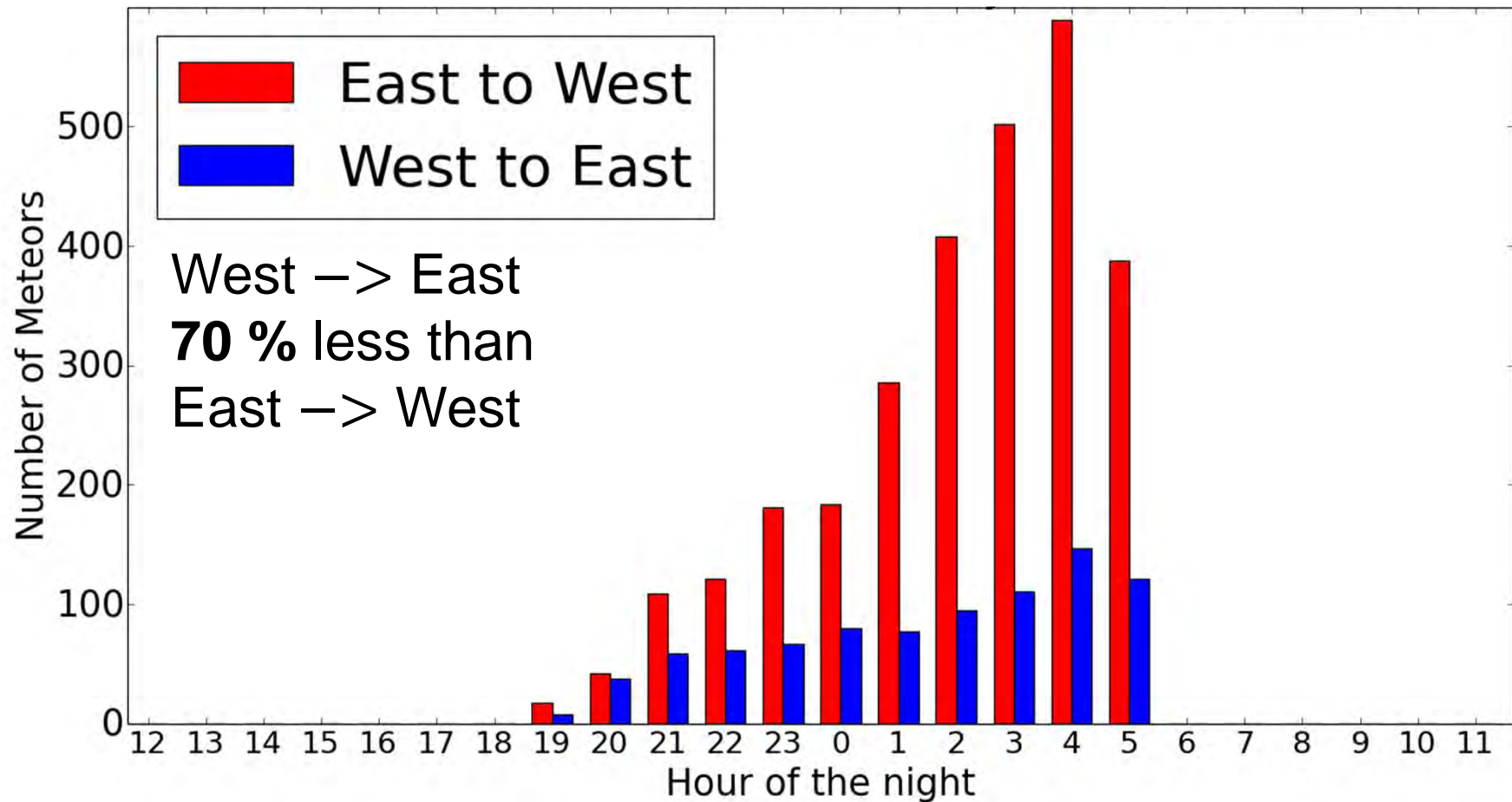
Table of Contents

- Velocity Distribution
- Stream Velocity
- **Apex Contribution**
- Conclusion and Outlook

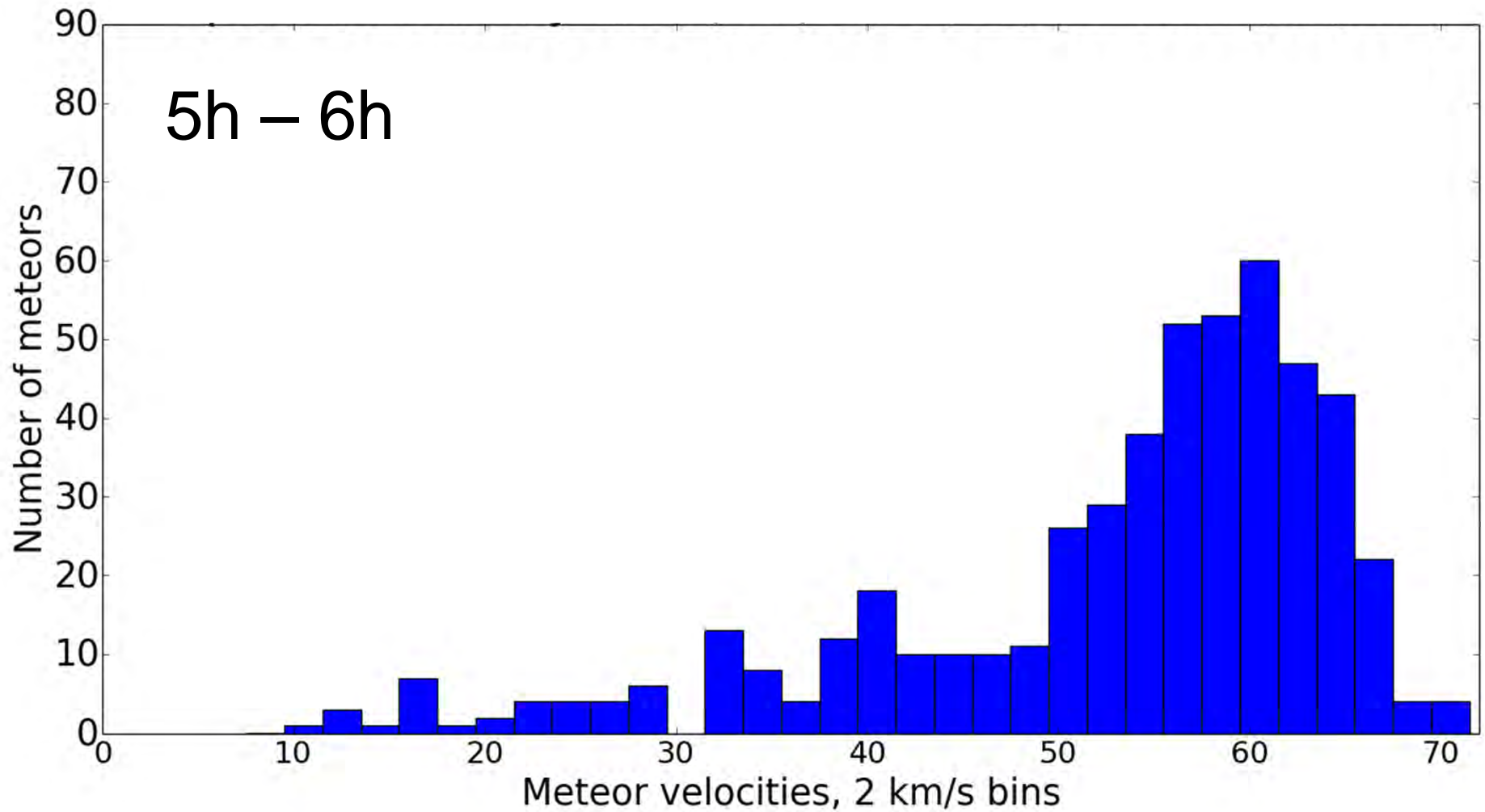
Sporadic Velocity Distribution



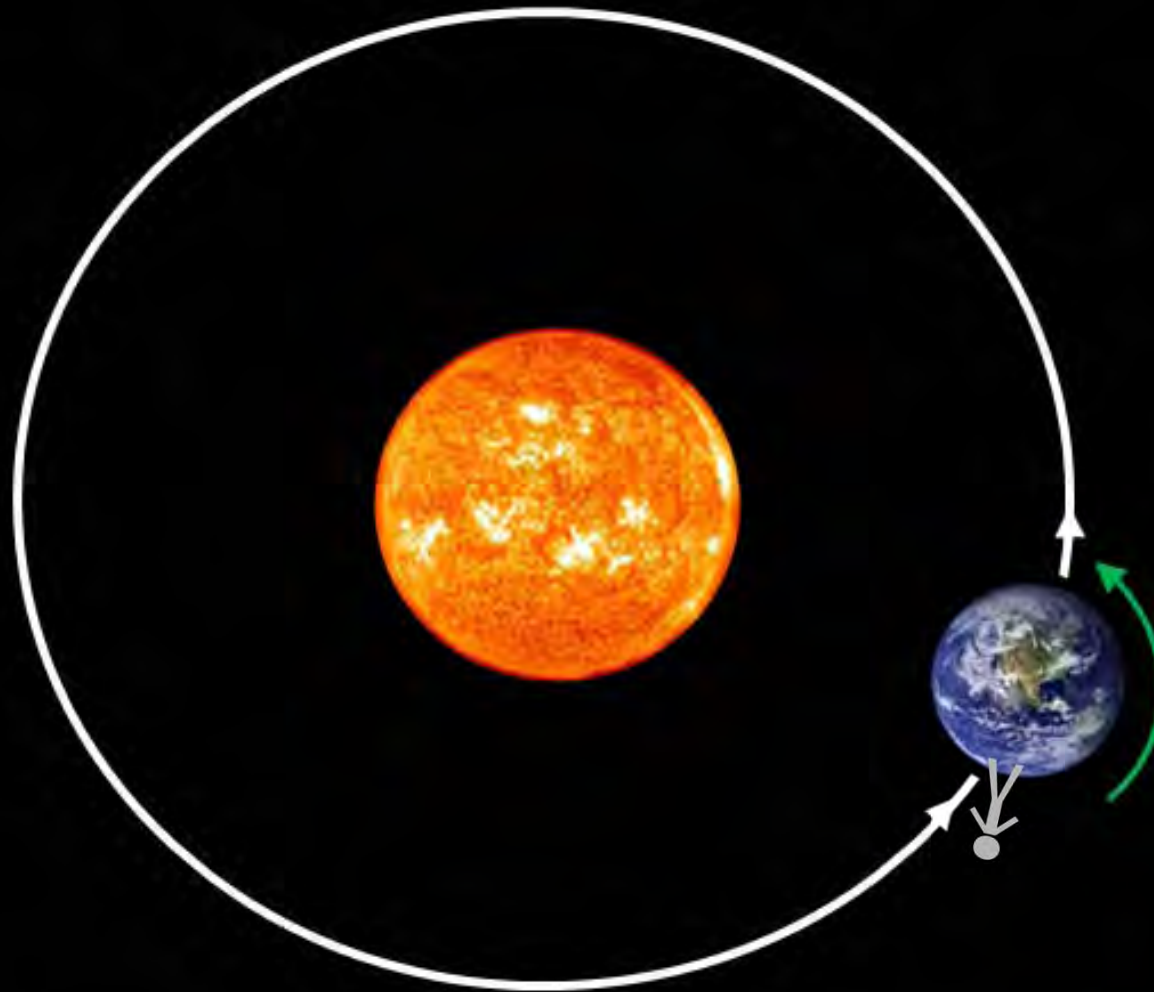
Sporadics throughout the night East → West



Sporadic Velocity Distribution as a function of local time



Apex Contribution



Apex Contribution

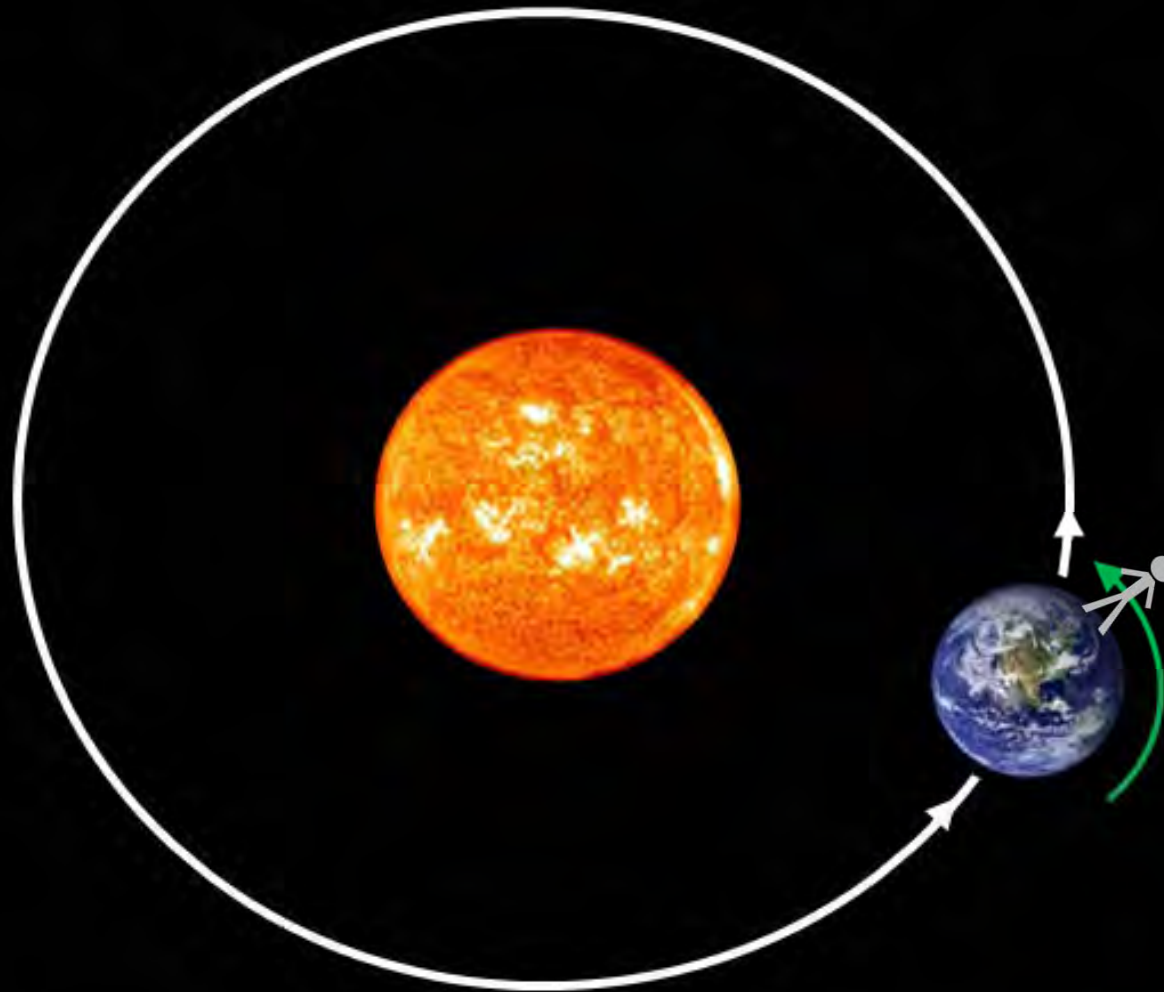


Table of Contents

- Velocity Distribution
- Stream Velocity
- Apex Contribution
- **Conclusion and Outlook**

Conclusion

- Shower velocities match the IMO values
- Velocity Distribution of heavier Meteors matches the Theory
- Sporadic Velocity Peak at 60 km/s comes from the Apex Contribution

Future Work

- ➔ Analyze more showers
- ➔ Determine the true velocity distribution of the unbiased measurements
- ➔ Conduct an error evaluation

A dark night sky filled with numerous stars of varying brightness. A prominent, bright white streak, likely a comet or meteor, cuts diagonally across the lower half of the frame from the bottom left towards the center. The text "Thank you all for your attention!" is centered in the upper half of the image in a white, sans-serif font.

**Thank you all for your
attention!**

21
2013/12/07 04:12:11
2013/12/07 04:12:12