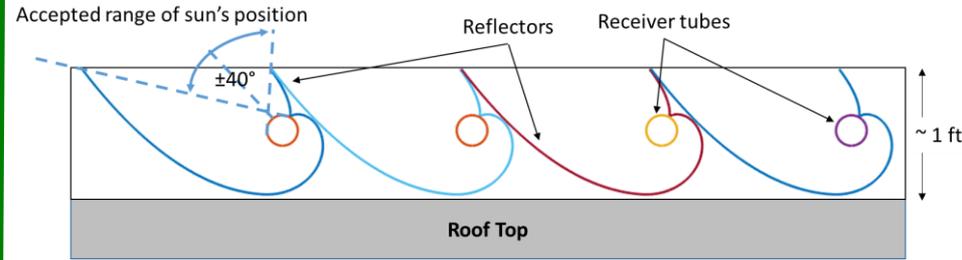


Nonimaging Optics SHadless 4 Distributed Energy (NOSH4DE)

**Dr. Roland Winston,
Winston Cone Optics (WCO)**

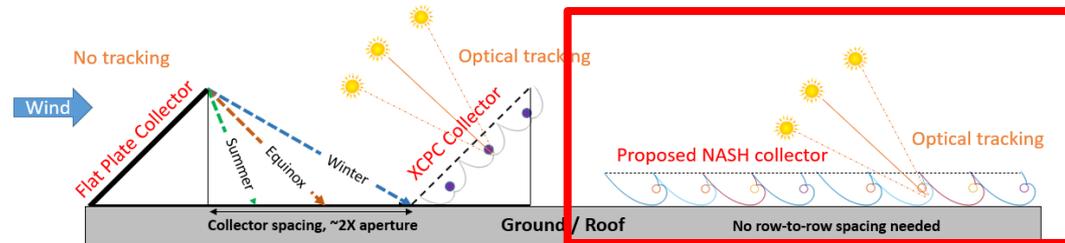
Technology Summary

- Provides heat up to 250 °C for thermal, utilization of both sides for bifacial PV
- Flexible and simple installation, operations (non-tracking)
- Maximizes energy generation per land area



Technology Innovation

- Eliminate shading, row-to-row spacing, maximize production per foot print area
- Eliminate wind load, easy to deploy and repack

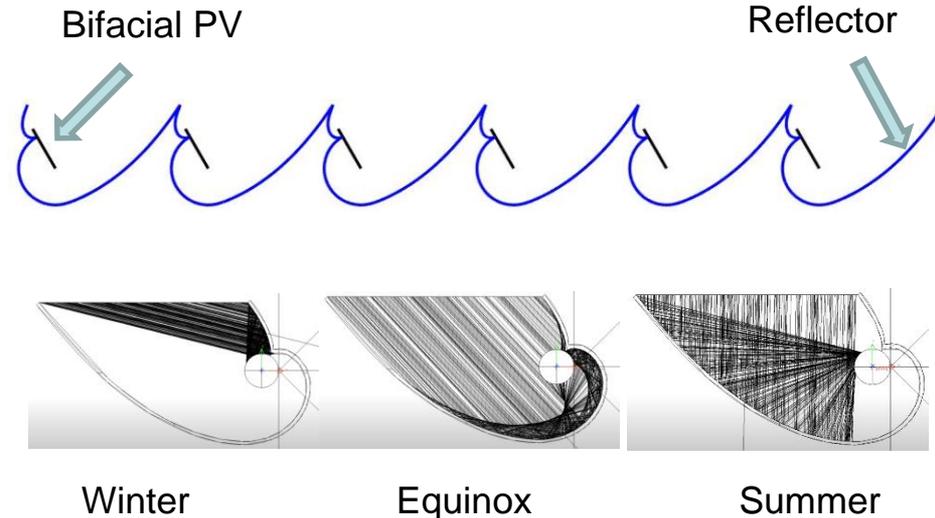


Technology Impact

- <300 F industrial heat processing market such as steam (\$1.4 Trillion/year)
- *Building Integrated PV or utility scale PV without tracker*
- Establish U.S. leadership in both solar process heating and PV optics.

Technology Targets

Metric	Single axis tracking optics	Proposed
Moving parts	Yes	No
roof mountable	Complex	Set and forget
Facade integration	No	Yes



Non-tracking Solar Optics that has NOSH4DE



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