

# Bibliographie

Sources bibliographiques sur la concentration citées dans la partie « Concentration du rayonnement solaire pour la production de chaleur primaire solaire ».

Four solaire à échelons (Henry La Blanchetais 1982)

Tours et secondaires ([Kribus et al. 1998b](#); [Segal and Epstein 1999](#); [Spirkl et al. 1998](#); Spirkl et al. 1997)  
Couplage récepteurs / champ (Kribus et al. 1998a; Segal and Epstein 1997; Steinfeld and Schubnell 1993)

Héliostat focalisant et four solaire ([Chen et al. 2001](#); [Chen et al. 2002](#))

Un complément (Janvier 2003) est particulièrement centré sur les articles concernant les codes de calcul des champs d'héliostats de centrales à tour (des plus anciens aux plus récents): (Geyer et al. 2001; Grasse et al. 1999; [Grasse et al. 2000](#); Kistler 1986; Kribus 1997; Kribus et al. 1999; Leary and Hankins 1977; Lipps and Vant-Hull 1974; Lipps and Vant-Hull 1978; Lipps and Walzel 1978; McDonnell-Douglas and Weizmann-Institute-of-Science 1995; Monterreal et al. 1999; Pitman and Vant-Hull 1986; Romero et al. 1999; Segal 1996; Timinger et al. 2000; Vant-Hull 1991; Vant-Hull and Hildebrandt 1976; Vant-Hull et al. 1999; Vittitoe and Biggs 1976; Vittitoe and Biggs 1981; Winter et al. 1991; Yogev et al. 1998)

Cf. [SolarPACES Annual Report 2000](#)

Les références des sources citées dans le reste de la présentation sont consultables dans la partie : « Production d'hydrogène par cycles thermochimiques : passé, présent, énergie primaire solaire ou nucléaire ? »

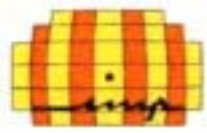
## References.

- Chen, Y. T., Chong, K. K., and Bligh, T. P. (2001). "Non-Imaging, focusing heliostat." *Solar Energy*, 71(3), 155-164.
- Chen, Y. T., Chong, K. K., and Bligh, T. P. (2002). "Report of the first prototype of non-imaging focusing heliostat and its application in high temperature solar furnace." *Solar Energy*, 72(6), 531-544.
- Geyer, M., Pitz Paal, R., Steinfeld, A., and Tyner, C. E. (2001). "International Energy Agency (IEA) Solar Power and Chemical Energy Systems, SolarPACES Annual Report 2001." Deutsches Zentrum für Luft- und Raumfahrt e.V. Köln, Germany.
- Grasse, W., Becker, M., Steinfeld, A., and Tyner, C. E. (1999). "International Energy Agency (IEA) Solar Power and Chemical Energy Systems, SolarPACES Annual Report 1999." Deutsches Zentrum für Luft- und Raumfahrt e.V. Köln, Germany.
- Grasse, W., Geyer, M., Pitz Paal, R., Steinfeld, A., and Tyner, C. E. (2000). "International Energy Agency (IEA) Solar Power and Chemical Energy Systems, SolarPACES Annual Report 2000." Deutsches Zentrum für Luft- und Raumfahrt e.V. Köln, Germany.
- Henry La Blanchetais, C. (1982). "Perspectives sur la réalisation de fours solaires à vocation industrielle." *Entropie*, 18(107-108), 28-61.

"Concentration du rayonnement solaire pour la production de chaleur primaire solaire"  
Exposé de C.Royère

" GAT n°7: Solaire Thermique "

Lieu: IMP Perpignan, Zone d'activité Technosud  
Date: 16 Octobre 2002

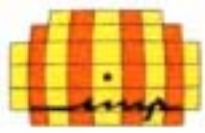


- Kistler, B. L. (1986). "A user's manual for DELSOL3." Sandia National Laboratories, Albuquerque, NM.
- Kribus, A. "Towards large-scale solar energy systems with peak concentration of 20000 suns." *SPIE Int. Symp. Optical Sci. Engrg. Instrumentation*, San Diego.
- Kribus, A., Doron, P., Rubin, R., Karni, J., Reuven, R., Duchan, S., and Taragan, E. (1999). "A Multistage Solar Receiver:: The Route To High Temperature." *Solar Energy*, 67(1-3), 3-11.
- Kribus, A., Kotera, Y., Zaibel, R., Carey, D., Karni, J., and Segal, A. (1998a). "A solar-driven combined cycle power plant." *Solar Energy*, 62(2), 121-129.
- Kribus, A., Spirkel, W., Krupkin, V., and Yogev, A. (1998b). "Performance limits of heliostat fields." *Journal of Solar Energy Engineering, Transactions of the ASME*, 120(4), 240-246.
- Leary, P. L., and Hankins, J. D. (1977). "A user's guide for MIRVAL (SAND77-8280)." Sandia National Laboratories, Albuquerque, NM.
- Lipps, F., and Vant-Hull, L. L. "Shading and blocking geometry for a solar tower concentrator with rectangular mirror." *ASME winter annual meeting, 1974*, New-York.
- Lipps, F., and Vant-Hull, L. L. (1978). "A cellwise method for the optimization of large central receiver systems." *Solar Energy*, 20, 505-516.
- Lipps, F., and Walzel, M. D. (1978). "An analytical evaluation of the flux density due to sunlight reflected from a flat mirror having a polygonal boundary." *Solar Energy*, 21, 113-121.
- McDonnell-Douglas, and Weizmann-Institute-of-Science. (1995). "High concentration solar central receiver power generation system - feasibility study." McDonnell-Douglas, ElOP, Ormat, Rotem and Weizmann Institute of Science.
- Monterreal, R., Flamant G, e., Ferriere A, e., and Pharabod F, e. (1999). "A new computer code for solar concentrating optics simulation. Proceedings of the 9th SolarPACES International Symposium on Solar Thermal Concentrating Technologies, STCT 9, Font-Romeu, France, 22-26 June, 1998." *Journal-de-physique-IV*, 9(3), Pr3.77-Pr3.82.
- Pitman, C. L., and Vant-Hull, L. L. (1986). "Performance of optimized solar central receiver systems as a function of receiver thermal loss per unit area." *Solar Energy*, 37(6), 457-468.
- Romero, M., Fernandez, V., Sanchez, M., Flamant G, e., Ferriere A, e., and Pharabod F, e. (1999). "Optimization and performance of an optically asymmetrical heliostat field. Proceedings of the 9th SolarPACES International Symposium on Solar Thermal Concentrating Technologies, STCT 9, Font-Romeu, France, 22-26 June, 1998." *Journal-de-physique-IV*, 9(3), Pr3.71-Pr3.76.
- Segal, A. "WISDOM - Weizmann Institute solar dedicated comprehensive mastercode." *Solar '96, the 1996 ASES Annual Conference*, Asheville, NC, 308-312.
- Segal, A., and Epstein, M. (1997). "Modeling of solar receiver for cracking of liquid petroleum gas." *Journal of Solar Energy Engineering, Transactions of the ASME*, 119(1), 48-51.
- Segal, A., and Epstein, M. (1999). "Comparative performances of "tower-top" and "tower-reflector" central solar receivers." *Solar Energy*, 65(4), 207-226.

"Concentration du rayonnement solaire pour la production de chaleur primaire solaire"  
Exposé de C.Royère

## " GAT n°7: Solaire Thermique "

Lieu: IMP Perpignan, Zone d'activité Technosud  
Date: 16 Octobre 2002



- Spirkl, W., Kribus, A., Timinger, A., Ries, H., and Muschaweck, J. (1998). "Non-axisymmetric reflectors concentrating radiation from an asymmetric heliostat field onto a circular absorber." *Solar Energy*, 63(1), 23-30.
- Spirkl, W., Mann, M. K., Timinger, A., Ries, H., Muschaweck, J., and Kribus, A. "Asymmetrical cone-type secondary concentrators for Fresnel type reflectors in solar towers." *SPIE, The International Society for Optical Engineering, Proceedings 1997*, 86-93.
- Steinfeld, A., and Schubnell, M. (1993). "Optimum aperture size and operating temperature of a solar cavity-receiver." *Solar Energy*, 50(1), 19-25.
- Timinger, A., Spirkl, W., Kribus, A., and Ries, H. (2000). "Optimized secondary concentrators for a partitioned central receiver system." *Solar Energy*, 69(2), 153-162.
- Vant-Hull, L. L. (1991). *Concentrator optics*, Spinger-Verlag, Berlin, Heidelberg, New-York.
- Vant-Hull, L. L., and Hildebrandt, A. F. (1976). "Solar thermal power system based on optical transmission." *Solar Energy*, 18, 31-39.
- Vant-Hull, L. L., Izygon, M. E., Imhof, A., Flamant G, e., Ferriere A, e., and Pharabod F, e. (1999). "Optimization of central receiver fields to interface with applications requiring high flux density receivers. Proceedings of the 9th SolarPACES International Symposium on Solar Thermal Concentrating Technologies, STCT 9, Font-Romeu, France, 22-26 June, 1998." *Journal-de-physique-IV*, 9(3), Pr3.65-Pr3.70.
- Vittitoe, C. N., and Biggs, F. (1976). "The HELIOS model for the optical behavior of reflecting solar concentrators (SAND76-0347)." Sandia National Laboratories, Albuquerque, NM.
- Vittitoe, C. N., and Biggs, F. (1981). "A user's guide to HELIOS - a computer program for modeling the optical behavior of reflecting solar concentrators, appendices concerning HELIOS-Code details (report number: SAND81-1562 (Part III) and SAND81-1180 (Part I))." Sandia National Laboratories, Albuquerque, NM.
- Winter, C. J., Sizmann, R. L., and Vant-Hull, L. L. (1991). *Solar Power Plants; fundamentals, technology, systems, economics*, Spinger-Verlag, Berlin, Heidelberg, New-York.
- Yogev, A., Kribus, A., Epstein, M., and Kogan, A. (1998). "Solar "tower reflector" systems: a new approach for high-temperature solar plants." *International Journal of Hydrogen Energy*, 23(4), 239-245.

"Concentration du rayonnement solaire pour la production de chaleur primaire solaire"  
Exposé de C. Royère

## " GAT n°7: Solaire Thermique "

Lieu: IMP Perpignan, Zone d'activité Technosud  
Date: 16 Octobre 2002