

# Heavy Bosons Other Than Higgs

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Section covers searches for scalar or vector bosons that are not contained in the standard model.

(Higgs and axion are not included.)

Three reviews contained in section:

- *W' Physics* (Babu, Kolda '05)
- *Z' Physics* (Babu, Kolda '05)
- *Leptoquark Quantum Numbers* (Tanabashi '05)

Encoding by M. Tanabashi, overseer T. Watari, coordinator J. Beringer.

## $W'$ Searches:

- Review: minor update from the version in '97,
- Direct searches based on Tevatron 100 pb<sup>-1</sup>.  
CDF in  $W' \rightarrow tb$  and  $W' \rightarrow WZ$ , D0 in  $W' \rightarrow q\bar{q}$  .
- No new results in indirect searches for  $W_R$  and no new limits on the  $W_L$ - $W_R$  mixing angle.

## $Z'$ Searches:

- Review: minor update from the version in '02.
- New data in the '06 edition:  
D0 Run I (100 pb<sup>-1</sup>)  $Z' \rightarrow q\bar{q}$  ,  
OPAL  $Z' \rightarrow e^+e^-$  , CDF Run II (200 pb<sup>-1</sup>)  $Z' \rightarrow l^+l^-$   
(not in the review yet).

## Leptoquark Searches: (in the gauge and Higgs boson section)

- Review: expanded by 1 page from the version in '01, largely following suggestions from the advisory committee. [more theoretical motivations, indirect and direct limits]
- New limits in '06 edition:
  - pair production from CDF and D0 Run II (200—250 pb<sup>-1</sup>)
  - single production from H1 and ZEUS,
  - indirect limits from Belle and ZEUS.

## Other Searches:

No new limits or data this time. Untouched.

## Comments:

New class of theories that motivate to think of heavy bosons since '02  
Higher order oblique corrections beyond S, T, U.