

Diamond Jubilee Reflections

Mike Poole

ASTeC/Cockcroft Institute

STFC and Liverpool

Early Career

1966 Joined DNPL NINA Beam Lines Gp

No training

No students

No collaborations

Isolation !

No HEI AST projects

Self education

No international travel

No publications policy

And no UK R&D programme in AST !

Projects and Development

- Coil diagnostics (glass 'bombs')
- NINA commissioning
- Beam transport simulations
- High power Faraday Cup

- Programmed Quadrupoles
- EPIC

RAL AP collaboration

Magnet technology

Neil Marks !

Note: HEP moves to CERN with SPS - NINA closure 1978

and NIMROD

Synchrotron Radiation

- **SRS Design Study (1975) and Delivery**

Major role - design, construction, commissioning

Broad experience

Success – high profile

Richard Walker

SCW collaboration (RAL)

- **International Conference presentation (1977)**

- **ESRF (Tech + Costing)**

- **HELIOS**

- **HBL (SRS-2)**

High brightness (HEP)

Undulators

Anglo-Soviet Agreement

Free Electron Lasers

- Life changing – 1978 Frascati Wiggler Workshop (Madey)
- FELIX IRFEL proposal in 1979 - rejected by SRC
- UKFEL (1982-86) Glasgow/Heriot-Watt

Gain but no oscillation

Richard Walker
Brian McNeil
Dino Jaroszynski

- FELIX in NL

Transferred UK undulator

Lased 1991

EPSRC programme

- Other FEL initiatives (inc Oxford proposal)
- EU and ONR Reviews (later ESFRI)
- EUFELE breaks world record short wavelength (2001)

Further Project Developments

- UK Light Sources

DAPS (1988)

SINBAD/DIAMOND (1993)

Diamond Green Book (2002)

4GLS, ALICE (EMMA)

NLS

2011 A UK FEL lases on ALICE !!!

- HEP Studies

LC, NF,

CERN upgrades

plus other collaborators

- Accelerator Institutes

ASTeC CI JAI

Training, R&D

Five Decades Later ...

Training formalised

Many studentships

Strong HEI links

Mostly collaborations (international normal)

Publication important (PRST-AB)

Broad R&D Programmes

Wider applications

Professional status improved (IOP)

A marvellous career opportunity - believe me !