

Index

Page numbers in italics
refer to illustrations
and 'n' to notes.

- ablation 64, 74n.31
Accomplishment of a Dream
(Trofimov) 107
Adenauer, Konrad 9–10
Aerozin 50 fuel 10
Agena spacecraft 47n.6
Ahead of the Times (Evtsev) 106–7
Alice Springs Group 91, 92
aliens 170, 173
Amaldi, Edoardo 19
Andersen, Kurt 170
Anglo-Australian Joint Project 76–8
Apollo programme
 construction 70
 display 154, 155
 Mercury legacy 54, 55, 67
 and Saturn 11, 26n.13
'Are We Alone?' (show) 169–71, 172
Ariane V rocket 9
Arianespace 14
ASAT 23–4
Astris rocket
 development 4, 8–15, 11, 12
 engine 93
 political artefact 22–3, 25, 26n.14
Atlas rocket 66, 67
Aubinière commission 23
Aubinière, Robert 13
Aurora 7 spacecraft 154–5
Ausroc 2 sounding rocket 87
Ausroc rocketry group 87, 97n.32
Australia 4, 76–7, 77, 94, 94–7n
Australian Army 88–9, 89

Bauman University 106
Bennett, Jim 159
Berry, Chuck 171–2
Bertiger, Barry 118
Biermann, Ludwig 18, 27n.26
Black Arrow rocket
 development 4, 5
 G8 engine 31, 34, 36, 38, 39, 43
 history 29–47, 31, 45, 48–9n
 and Woomera 76, 79, 95n.6,
 97n.28
Black Knight rocket
 history 30, 33–44, 38, 48–9n
 and Woomera 79
Black Prince rocket 35–6, 48n.21
Bland, W 63, 65, 70, 74–5n
Blue Streak missile
 history 20, 21, 35–41, 43, 48n.22
 and Woomera 89, 91, 97n.28
Bock, Günter 17–18, 20
Bölkow, Ludwig 18, 21
Boon, T 46, 49n.50–1
Braun, Wernher von 16
Bredt, Irene 17
Bristol Siddeley Engines (BSE) 34,
 35, 43, 48n.18
British Interplanetary Society 17
Brussels World's Fair 151, 152
Buran shuttle 103
Burke, Walter 53, 54, 57, 73n

Cape Canaveral 66
Capsule Coordination Group 70
Capsule System Test (CST) 64
CETS 22
Chelomei, Vladimir 107, 108,
 114n.39
Chertok, Boris 105–6, 105, 113–15n
Circarama 152
coins 144
Cold War 1–5, 7
Collins, Martin 51
Contact (Sagan) 169
Cooper, Gordon 71
Coralie rocket 20, 91, 93
Crusade programme 39, 40, 42, 43
cryogenic fuels 10
Cuckoo rocket motor 39
curation 159–68

dark matter 162–3
Dazzle programme 38–43
de Havilland company 41
Defence Science & Technology
 Organisation (DSTO) 80–1
Department of Defense 124, 154–5
Deutsches Museum 9, 10, 11
Deutsches Zentrum für Luft- und
 Raumfahrt 25
DeVorkin, David 5
Dienststelle Blanck 18
'Digital Universe' display 161–2, 166

Dougherty, Kerry 4
Drake, Frank 173
Druyan, Ann 169
Dryden, Hugh 52, 53n, 64, 154
Durrans, Brian 5

Echo satellite 154
ELDO
 and Black Arrow 37–8, 43
 Council 12, 13, 22
ELDO B launcher 22
 history 8, 12–13, 17–25, 27n.17
 and Woomera 76, 77, 85–6,
 95n.5, 97n.31
ELDO A launcher *see* Europa rocket
electronic-beam welding 11
Energia museum 102, 113n.18, 153
Erhard, Ludwig 18
ERNO 23–4
ESRO 16, 18, 19, 22
'Euro-Gaullism' 8
Europa rocket
 history of I and II 8–13, 13, 14,
 20–4, 22, 24, 27n.16
 recovery F1 and F3 91
 recovery F4 and F5 85–93, 90
 recovery F6/2 or F7 93
 recovery of satellite 88–93
European Launcher Development
 Organisation *see* ELDO
European Space Agency (ESA) 13,
 23
Evtsev, Ivan 106–7
'Explore the Universe' gallery 5,
 160–8
Explorer 1 satellite 151, 157n.21
explosive forming 11

Faget, Max 55
Feoktistov, Konstantin 147
Finn, B 46, 49n.49
Fisher, L 63, 65, 70, 74–5n
Fitz, Henry 168
Flugwerft Schleissheim Museum 9
Ford, Harrison 169–70, 176, 179
Freedom 7 spacecraft 68
Friendship 7 spacecraft 153, 153,
 155
Gagarin Spaceflight Museum 150

- Gagarin, Yuri 99–103, 145–7, 150, 153, 157n.14
 Gamma engines 31, 34, 36, 38, 39, 43
 Gaslight programme 38, 39
 gateways 128
 Gemini spacecraft
 Gemini 9 32, 47n.6
 Mercury legacy 54–5, 70, 74n.27, 75n.44
 World Fairs 155
 Germany 7–25, 27n.20
 GfW space society 17, 24
 Gilruth, Robert 67
 Glenn, John 50, 68, 69, 75n.37, 153
 Globalstar 128
 Glushko, Valentin 107, 114n
 Gray, Wilbur 60, 70, 72, 74n.25
 Grissom, Gus 68
- Harwit, Martin 160
 Hawker Siddeley 11
 Hayden Planetarium 169–71, 172–4
 Heinkel 18
 Henderson, Bruce 80–1
 Herschel telescope 161, 167, 168n.5
 Herschel, William 161, 164
 Holmgren, Beth 104
 Hubble mirror 162, 164
 Huntsville, Alabama 16
- image-tube spectrograph 162
 Iridium satellites 5, 116–38, 121–2, 125, 138–41n
- Jane's Spaceflight Directory* (Turnhill) 33, 48n.8
 Johnston, Paul 155
 JSC Zvezda 143
 Ju-52 aircraft 10
 Junkers 18
 Junkers F-11 10
 Junkers, Hugo 10
juste retour 23
- Kamanin, Nikolai 150
 Kestrel rocket motor 9
 Khrunichev 143
 Korolev, Sergei 98, 100–9, 112n, 145, 150, 157n.18
 Kosmos Pavilion 101, 145–6, 148–50, 149, 157n.16
 Kourou launch centre 12, 22
- Leonov, Aleksei 112n.2
 Leopold, Raymond 118
 Lewis, Cathy 5
 Lick spectrograph 161, 164, 165, 166
 link margin 127, 139n.19
 Litski, V K 143
 LK lunar lander 106
 Lockheed 134
 Ludwig Bölkow AG 18
 Luna spacecraft 112n.5
 Lunar Excursion Module 36
 Lyons, D J 35
- McDonnell Aircraft Corporation 52, 55, 58–60, 59, 62–4, 66–72
 Mackenzie, D A 44
 Makovenyi, Nadia 160
 Mars-3 spacecraft 112n.5
 Max Planck Society (MPE) 18
 Mayall telescope 166
 MBB 23–4
 Memorial Museum of Cosmonautics 100, 102
 Mercury spacecraft
 display 147, 153, 153, 154
 history 5, 50–73, 56, 59, 63, 65–9, 73–5n
 Messerschmitt 18
 Millard, Doug 4
 Ministry of Aviation 43
 Mishin, Vasili 109–11, 110
 Molnia satellite 112n.5
 Montreal World's Fair 155–6
 Morton, Peter 33, 48n.9–10
 Moscow Planetarium 143, 144
 Motorola 117–37, 119, 138–40n
 Motorola University 133
 Mount Wilson cage 16
 Mukhina, Vera 145
- N-1 rocket 105, 107
 NASA
 curation 161
 Iridium 130, 131
 Mercury 50–7, 60, 62, 64, 67–73
 SETI 172
 Soviet programmes 109–10
 space displays 142
 World Fairs 154–5
 National Air and Space Museum 109–10, 142, 145, 155
 National Parks and Wildlife Service 83
- Neptune 171
 New York World's Fair 154, 154, 157n.31
 Nicklas, Brian 5
 nitrogen tetroxide 10
 Noble, D F 44, 47, 51
Normal Accidents (Perrow) 57, 74n.18
- Oltarzhevski, Viacheslav 146
 Oodnadatta 87, 88
 'Operation Blastoff' 88
 optical spectrum 163
- Palomar camera 162
 Palomar spectrograph 161, 164, 166
 Paris Air Show 147
 Peenemünde project 7, 9, 15, 16, 17
 perigee–apogee stage 12
 Perot Foundation 109
 Perrow, Charles 57, 74n.18
 Peterson, Kenneth 118
 phased-array antennas 131
 Pioneer spacecraft 171, 171
 Polaris programme 71
 Poole, Herman 176
 process icon 136
 Program Evaluation and Review
 Technique (PERT) 71, 75n
 Project Control Board 70
 Prokhorov, Alexander 104, 113n.26
 Prospero satellite 46, 95n.6
- Quality Assurance Association 12
 Quick, August Wilhelm 17–18
- R-7 rocket 107
Raketenflugplatz 9, 26n.10
 Raytheon 134
 Reaction Control System (RCS) 68–9, 75n.37
 Redstone rocket
 and Mercury 67–8
 Wresat 80–4, 80, 84, 85, 89, 96n.18
 Re-entry Physics Co-ordination Panel 40
 Robinson, Harold 33, 37, 48n.12, 49n.27
 Rocket and Missile Park 79
 Rocket Retrieval Group 80–9, 89, 91–4, 96n.23
Rockets and People (Chertok) 105, 113n.27

- Rose Center 169–76, 179
 Royal Aircraft Establishment (RAE) 35–42, 45
 Royal Australian Air Force 87
 RSC Energia 102, 107, 143
 RZ2 engines 89, 91, 93, 97n.36
- S. P. Korolev Memorial Museum 100, 112n.8
 Sagan, Carl 169, 172–4
 Sänger, Eugen 17
 SARO Ltd 34, 35, 43, 45, 49n.46
 Saturn rocket 11, 26n.13, 155
 Science Museum 29–33, 47n.5, 179n.7
 SciTec Pty Ltd 87
 Scranton, Philip 4–5
 Seattle World's Fair 153–5
 Seebohm, Friedrich 17
 Service Engineering Department Reports (SEDR) 70
 SETI project 172–3, 177, 178, 179n
 Shepard, Alan 68
 Siddiqi, Asif 4–5
Silver Bird 17, 27n.24
 Simpson Desert 80–7, 82, 91–2, 94
 Six Sigma 129, 132–5, 140n.28
 Skybolt missile 36
 Smith, Dick 80–1, 88, 96n.21
 Soviet space museums 142–56
 Soviet space programme 98–111, 112–15n
 Soyuz spacecraft 112n
- space creatures 170, 179n.2
Space is the Place (Poole) 176
 Space Shuttle 24
 Sparta Project 80, 83, 96n.18
 Specification Control Drawings 60–1, 61
 Spielberg, Steven 176
 Sputnik satellites 146, 149, 153
 Stamps 143–4
 Stoltenberg, Gerhard 22
 Strauss, Franz Josef 18, 19
 Sun Ra 176
 supernova 1987A 162
 switching technology 128, 139n.21
- Tagg, Albert 34, 35
 Telecom Australia 83
 Tereshkova, Valentina 103
The Far Planets (Time-Life) 171
 Thorneycroft, Peter 19
 Tikhonravov, Mikhail 107
 time capsule 154
 'To Mars and Beyond' exhibition 93
 Trischler, Helmuth 4
 Trofimov, Vladimir 107
 TRW Corporation 83, 96n.25
 Tsiolkovski, Konstantin 98, 100, 145
 Tsiolkovski Museum 100–3, 112n.5, 145
 Tycho's sphere 161, 164
- United States military 55, 73–4n.13, 80, 87, 131, 137
- universe, the 163
- V-2 rocket 7, 9
 Vanguard satellite 154
 VDNKh 101–2, 112n.11, 145–6, 148, 150, 153
 virtual factory 134–5, 135
 Voskhod spacecraft 98, 112n.2, 147
 Vostok spacecraft 98, 102–3, 112n.5, 146–50, 153, 157n.14
 Voyager spacecraft 171–2, 171
- Waxwing apogee motor 45
 Weapons Research Establishment (WRE) 78
 Webb, James 155
 West Germany 4, 8–9
 Wheeler, Ray 34, 35
 Williams, Walter 52–3, 72, 73n
 Winkler, Johannes 9
 Woomera
 Heritage Centre 78–81, 83, 85, 90, 94, 95–6n
 Rocket Park 84, 85, 90
 Rocket Range 4, 21, 38, 41, 76–94, 77, 94–7n
 World's Fairs 151
 Wresat project 76, 77, 80–1, 80, 84–5, 90, 96n
- X3 satellite 29, 30, 32, 32
- Zond spacecraft 106